American Geophysical Union Fall Meeting
December 9 – 13, 2024, Washington D.C.
The University of Oklahoma

Monday, December 9, 2024

Geophysical Characterization of Sulfur Deposits: Investigating a Terrestrial Analog for Martian Environments in Oklahoma

Dani Storms[1], Itunu Apalara[1], Megan Elwood Madden[2], Caitlin Anne Hodges[3], Andrew Stephen Elwood Madden[4] and Sina Saneiyan[3], (1)University of Oklahoma, School of Geosciences, Norman, United States, (2)University of Oklahoma, Norman, United States, (3)University of Oklahoma, School of Geosciences, Norman, OK, United States, (4)University of Oklahoma, Norman, OK, United States

Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Documenting Early-Stage Woody Plant Encroachment Impact to Soil C and N Dynamics Within a Central Oklahoma Degraded Prairie Ecosystem

Taylor Frentz[1], Martha Jimenez-Castaneda[2], Greg Newman[3], Antonio Florentino, Dr.[4], Janine Sparks[5], Bailey Williams[6] and Timothy R Filley[4], (1)University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (2)University of Oklahoma, Norman, United States, (3)University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States, (4)The University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (5)The University of Oklahoma, Norman, United States, (6)University of Oklahoma Norman Campus, Norman, United States

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

A11K
Advances of Remote Sensing Inversion I Poster

Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France, Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK, United States, Reed Espinosa, NASA Goddard Space Flight Center, Greenbelt, United States and Jean-Claude Roger, University of Maryland College Park, Department of Geographical Sciences, College Park, MD, United States

Session Proposal

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

GH12B
Human Health and Safety in the Face of Climate-Charged Weather Disasters: Resilience Planning for Those Systems That Societies Rely Upon eLightning

Gabriel Michael Filippelli, Indiana University Indianapolis, Department of Earth and Environmental Sciences, Indianapolis, United States, Geoffrey S Plumlee, USGS Chief Scientist, Reston, United States, Claire J. Horwell, Durham University, Department of Earth Sciences, Durham, United Kingdom and Michael C Wimberly, University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States

Session Proposal

- *Monday, 9 December 2024*
- *10:20 – 11:50*

- *eLightning Theater 1 (Convention Center)*

AE14A
Advances in Instrumentation and Signal and Data Processing Methods for Atmospheric Electricity Applications II Oral
Michael Stock, University of Oklahoma Norman Campus, Norman, United States, Elizabeth DiGangi, Earth Networks Inc., Research and Development, Germantown, United States and Yunjiao Pu, Duke University, Department of Electrical and Computer Engineering, Durham, NC, United States
Session Proposal

- *Monday, 9 December 2024*
- *16:00 – 17:30*
- *University of DC & Catholic (Marriott Marquis)*

H11B
Advances in Machine Learning for Earth Science: Observation, Modeling, and Applications I Oral
Guoqiang Tang, NSF National Center for Atmospheric Research, Boulder, United States, Mengye Chen, The University of Oklahoma, Center for Analysis and Prediction of Storms, Norman, United States, Yixin Wen, University of Florida, Department of Geography, Gainesville, United States and Phu Nguyen, University of California, Irvine, Department of Civil and Environmental Engineering, Irvine, United States
Session Proposal

- *Monday, 9 December 2024*
- *08:30 – 10:00*
- *144 A-C (Convention Center)*

The GeoCarb Mission: Persistent Greenhouse Gas Column Observations from Geostationary Orbit over the Americas
Sean Crowell, LumenUs Scientific, Oklahoma City, United States and Berrien Moore III, University of Oklahoma, School of Meteorology, Norman, OK, United States
Abstract

- *Monday 9, December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

ORANGE: An Algorithm Package for Atmospheric Remote Sensing
Feng Xu[1], Wenzhi Zhang[2], Taozhong Huang[3], Benting Chen[4], Lan Gao[5], Jens Redemann[5], Anthony B Davis[6], David J Diner[6], Marcin L Witek[6], Olga V. Kalashnikova[6], Michael A Bull[7], Michael J Garay[8], James McDuffie[7], Oleg Dubovik[9], Reed Espinosa[10] and Alexei Lyapustin[11], (1)University of Oklahoma Norman Campus, School of Meteorology, Norman, OK, United States, (2)University of Oklahoma Norman Campus, Norman, United States, (3)The University of Oklahoma, School of Meteorology, Norman, OK, United States, (4)University of Oklahoma, Norman, United States, (5)University of Oklahoma, School of Meteorology, Norman, United States, (6)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States, (7)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (8)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States, (9)University of Lille, Lille, France, (10)University of Maryland Baltimore County, Physics, Baltimore, United States, (11)NASA Goddard Space Flight Center, Greenbelt, United States
Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

AE11A

Advances in Instrumentation and Signal and Data Processing Methods for Atmospheric Electricity Applications I Poster

Michael Stock, University of Oklahoma Norman Campus, Norman, United States, Elizabeth DiGangi, AEM, Research & Development, Germantown, United States and Yunjiao Pu, Duke University, Department of Electrical and Computer Engineering, Durham, NC, United States

Session Proposal

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

H13B

Advances in Machine Learning for Earth Science: Observation, Modeling, and Applications III Poster

Guoqiang Tang, NSF National Center for Atmospheric Research, Boulder, United States, Mengye Chen, The University of Oklahoma, Center for Analysis and Prediction of Storms, Norman, United States, Yixin Wen, University of Florida, Department of Geography, Gainesville, United States and Phu Nguyen, University of California, Irvine, Department of Civil and Environmental Engineering, Irvine, United States

Session Proposal

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

NH13A

Costal Hazards and Resilience Poster

Mohamed Ahmed, Texas A&M University Corpus Christi, Physical and Environmental Sciences, Corpus Christi, TX, United States, Sina Saneiyan, University of Oklahoma, School of Geosciences, Norman, OK, United States, Esayas Gebremichael, Texas Christian University, Geological Sciences, Fort Worth, TX, United States and Ramadan Abdelrehim, Texas A&M University - Corpus Christi, Department of Physical and Environmental Sciences, Corpus Christi, United States

Session Proposal

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

A13H

Advances of Remote Sensing Inversion II Oral

Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France, Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK, United States, Reed Espinosa, NASA Goddard Space Flight Center, Greenbelt, United States and Jean-Claude Roger, University of Maryland College Park, Department of Geographical Sciences, College Park, MD, United States

Session Proposal

- *Monday, 9 December 2024*
- *14:10 – 15:40*
- *152 A (Convention Center)*

H12B

Advances in Machine Learning for Earth Science: Observation, Modeling, and Applications II Oral

Guoqiang Tang, NSF National Center for Atmospheric Research, Boulder, United States, Mengye Chen, The University of Oklahoma, Center for Analysis and Prediction of Storms, Norman, United States, Yixin Wen, University of Florida, Department of Geography, Gainesville, United States and Phu

Nguyen, University of California, Irvine, Department of Civil and Environmental Engineering, Irvine, United States
Session Proposal

- *Monday, 9 December 2024*
- *10:20 – 11:50*
- *144 A-C (Convention Center)*

Health Implications of Urban Heat Islands in Tropical Cities: Differences Between Indoor and Outdoor Microenvironments

Yusuf Jamal[1], Rajendra Baharia[2], Desai Vikas[3], Vijay Kohli[4], Ajit Mohanti[5], Courtney C Murdock[6], Mercedes Pascual[7], Rajesh Sharma[4], Sachin Sharma[8], Keshav Vaishnav[9] and Michael C Wimberly[1], (1)University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (2)National Institute of Malaria Research, Nadiad, India, (3)Vesu Urban Health Centre, Surat, India, (4)Ahmedabad Municipal Corporation Health Department, Ahmedabad, India, (5)National Institute of Malaria Research, Panaji, India, (6)Cornell University, Department of Entomology, Ithaca, United States, (7)New York University, New York, United States, (8)Indian Council of Medical Research-National Institute of Malaria Research, New Delhi, India, (9)Surat Municipal Corporation, Surat, India
Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Optimizing Laboratory Measurements for Below-Ground Soil CO_2 Isotopes

Martha Jimenez-Castaneda[1], Janine Sparks[1], Jordan Jones[1] and Timothy R Filley[2], (1)The University of Oklahoma, Norman, United States, (2)The University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States
Abstract

- *Monday, 9 December 2024*
- *08:00 – 17:30*
- *iPoster Gallery (Online)*

Exponential or unimodal relationships between nighttime ecosystem respiration and temperature at the eddy covariance flux tower sites

Cheng Meng[1], Xiangming Xiao[2], Pradeep Wagle[3], Chenchen Zhang[4], Li Pan[5], Baihong Pan[4], Yuanwei Qin[6] and Greg Newman[1], (1)University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States, (2)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, (3)Oklahoma and Central Plains Agricultural Research Center, USDA Agricultural Research Service, El Reno, United States, (4)School of Biological Sciences, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States, (5)University of Oklahoma, School of Biological Sciences, Norman, United States, (6)Department of Microbiology and Plant Biology, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States
Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Investigating the Effects of Common Forward Model Errors in Aerosol Retrievals of Synergistic Lidar and Polarimeter Observations

Reed Espinosa[1], Anin Puthukkudy[2,3], Greema Regmi[2], Nirandi Jayasinghe[2], Oleg Dubovik[4], Anton Lopatin[5], Pavel Lytvynov[5], Daniel J Miller[1], Adeleke Ademakinwa[2], Zhibo Zhang[6], Jose Vanderlei Martins[2,3], Kirk D Knobelspiesse[7], Feng Xu[8] and Jeffrey S. Reid[9], (1)NASA Goddard Space Flight Center, Greenbelt, United States, (2)University of Maryland Baltimore County, Department of Physics, Baltimore, United States, (3)Earth and Space Institute, Baltimore, United States, (4)Laboratoire d'Optique Atmosphérique, Villeneuve d'Ascq, France, (5)GRASP SAS, Remote Sensing Developments, Lille, France, (6)University of Maryland Baltimore County, Department of Physics, Baltimore, MD, United States, (7)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (8)University of Oklahoma, School of Meteorology, Norman, OK, United States, (9)Naval Research Laboratory, Marine Meteorology Division, Monterey, United States

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

A13H-08

MAIA Aerosol Retrieval: Algorithm Tests and Improvements

Wenzhi Zhang[1], Feng Xu[2], Benting Chen[1], Taozhong Huang[3], Ethan Stroberg[1], David J Diner[4], Michael A Bull[5], James McDuffie[5], Marcin L Witek[4], Michael J Garay[6], Olga V. Kalashnikova[4] and Alexei Lyapustin[7], (1)University of Oklahoma, Norman, United States, (2)University of Oklahoma, School of Meteorology, Norman, OK, United States, (3)The University of Oklahoma, School of Meteorology, Norman, OK, United States, (4)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States, (5)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (6)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States, (7)NASA Goddard Space Flight Center, Greenbelt, United States

Abstract

- *Monday, 9 December 2024*
- *15:22 – 15:31*
- *152 A (Convention Center)*

A14G-03

Synoptic Modulation on Mesoscale Convective Systems and Diurnal Cycle of Rainfall over Western Coastal West Africa

Shun-Nan Wu, University of Oklahoma, Oklahoma, United States, Naoko Sakaeda, University of Oklahoma Norman Campus, School of Meteorology, Norman, United States, Elinor R Martin, University of Oklahoma, School of Meteorology, Norman, United States and Rosimar Rios-Berrios, National Center for Atmospheric Research, Boulder, CO, United States

Abstract

- *Monday, 9 December 2024*
- *16:06 – 16:09*
- *eLightning Theater 1 (Convention Center)*

AE14A-03

Remote Measurements of Continuing Current Using ELF/VLF Magnetic Sensor

Yanan Zhu[1], Michael Stock[2,3], Jeff Lapierre[4], Elizabeth DiGangi[5] and Jacquelyn Ringhausen[4], (1)Earth Networks Inc., Germantown, MD, United States, (2)University of Oklahoma Norman Campus, Norman, United States, (3)Cooperative Institute for Severe and High-Impact Weather Research and Operations, Norman, United States, (4)AEM, Research & Development, Germantown, United States, (5)Earth Networks Inc., Research and Development, Germantown, United States

Abstract

- *Monday, 9 December 2024*
- *16:20 – 16:30*
- *University of DC & Catholic (Marriott Marquis)*

B11C-09
Quantifying advective flux contributions to energy budget closure at CHEESEHEAD19 study sites
Emily Mather, University of Wisconsin Madison, Madison, WI, United States, Ankur R Desai, University of Wisconsin Madison, Atmospheric and Oceanic Sciences, Madison, WI, United States, Stefan Metzger, Battelle, National Ecological Observatory Network, Boulder, United States, Sreenath Paleri, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma and NOAA Air Resources Laboratory, Boulder, United States and Brian Butterworth, NOAA Boulder, Boulder, United States
Abstract

- *Monday, 9 December 2024*
- *09:50 – 10:00*
- *150 B (Convention Center)*

H14D-08
Evapotranspiration in Rainfed and Irrigated Alfalfa in the U.S. Southern Great Plains
Pradeep Wagle[1], Afshin Shayeghi[2], Nishan Bhattarai[2], Brian K Northup[3], Corey Moffet[4], Stacey Gunter[5] and Rudra Baral[6], (1)USDA, USDA-ARS, El Reno, OK, United States, (2)University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (3)USDA-ARS, El Reno, OK, United States, (4)USDA-ARS, Southern Plains Range Research Station, Woodward, OK, United States, (5)USDA-ARS, Woodward, OK, United States, (6)University of Missouri Columbia, Columbia, United States
Abstract

- *Monday, 9 December 2024*
- *17:10 – 17:20*
- *143 A-C (Convention Center)*

V11A-03
Recurrence Rates of Explosive Volcanism in Paleo-equatorial Pangaea and the Effects of Volcanic Ash Loading on Biogeochemical Cycling Near the Peak of the Late Paleozoic Icehouse
Lily Pfeifer, Rowan University, Glassboro, NJ, United States, Qingting Wu, Montclair State University, Department of Earth and Environmental Science, Montclair, United States, Ying Cui, Montclair State University, Department of Earth and Environmental Studies, Montclair, NJ, United States, Jahandar Ramezani, MIT-EAPS, Cambridge, MA, United States, Michael J Soreghan, University of Oklahoma Norman Campus, School of Geosciences, Norman, United States, Jean Van Den Driessche, Géosciences Rennes, Rennes Cedex, France, Stephane Pochat, Laboratoire de Planétologie et Géodynamique, Nantes, France and Gerilyn S Soreghan, Univ of Oklahoma, Norman, United States
Abstract

- Monday, 9 December 2024
- 08:50 – 09:00
- 207 A (Convention Center)

PANGEA: A Pan-Tropical Airborne and Field Campaign for a Resilient World
Isaac Aguilar[1,2], Elsa Ordway[2], Ane Alencar[3], Adia Bey[4], Anabelle Cardoso[5], Dana Chadwick[6], Antonio Ferraz[7], Yanlei Feng[8], Jose D Fuentes[9], Tamilola Fatoyinbo[4], Liane S Guild[10], Matthew S Johnson[10], Michael Keller[7,11], Lydie Stella Koutika[12], Yue Li[13], Junjie Liu[7], Marcos Longo[14], Ian Mccubbin[7], Félicien Meunier[15], Charles E Miller[7], Helene C Muller-Landau[16], Patrick Namulisa[17], Robinson I Negron Juarez[18], Teodyl Nkuintchua[19], Matheus Nunes[20], Zoe Pierrat[7], Le Bienfaiteur Sagang Takougoum[13], Maria J Santos[21], Fabian D Schneider[7], Bonaventure Sonké[22], Hannah Stouter[13], César Terrer[8], Marius

von Essen[13], Sarah R Worden[13], Michelle Wong[23] and Xiangming Xiao[24], (1)California Institute of Technology, Pasadena, United States, (2)University of California Los Angeles, Los Angeles, CA, United States, (3)IPAM Amazon Environmental Research Institute, Brasilia, Brazil, (4)NASA Goddard Space Flight Center, Greenbelt, United States, (5)University at Buffalo, Geography, Buffalo, United States, (6)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States, (7)JPL/NASA/Caltech, Pasadena, United States, (8)Massachusetts Institute of Technology, Cambridge, United States, (9)Penn State University, University Park, United States, (10)NASA Ames Research Center, Moffett Field, United States, (11)USDA Forest Service, Rio Piedras, United States, (12)CRDPI, Pointe-Noire, People's Republic Of Congo, (13)University of California Los Angeles, Los Angeles, United States, (14)Lawrence Berkeley National Laboratory, Berkeley, United States, (15)Ghent University, Gent, Belgium, (16)Smithsonian Tropical Research Institute, Balboa, Panama, (17)Columbia University of New York, Palisades, United States, (18)Lawrence Berkeley National Laboratory, Berkeley, CA, United States, (19)World Resources Institute, Kinshasa, Congo, (20)University of Maryland College Park, College Park, United States, (21)University of Zurich, Zurich, Switzerland, (22)University of Yaoundé, Yaoundé, Cameroon, (23)Yale University, New Haven, United States, (24)University of Oklahoma, Norman, OK, United States
Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

TASZERS Findings Energize ARM Cloud Retrievals

Connor J. Flynn, University of Oklahoma Norman Campus, Norman, United States, Stephen H Jones, Aerodyne Research Inc., Billerica, MA, United States, Zachary Payne, Aerodyne Research, Inc., Billerica, United States and Timothy Bruce Onasch, Aerodyne Research, Inc., Billerica, MA, United States
Abstract

- Monday, 9 December 2024
- 08:00 – 17:30
- iPoster Gallery (Online)

Object-based Field Level Mapping of Irrigated Land across the US

Yashar Makhtoumi, University of Wisconsin Madison, Madison, WI, United States, Tyler J Lark, University of Wisconsin - Madison, Center for Sustainability and the Global Environment (SAGE), Nelson Institute for Environmental Studies, Madison, WI, United States and Yanhua Xie, University of Oklahoma, Geography and Environmental Sustainability, Norman, United States
Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Strengthening the Connection of Reference Standards and Ground-based Atmospheric Total Column Validation Networks

Annmarie Eldering[1], Elizabeth Spicer[2], Debra Wunch[3], Geoffrey C Toon[4], Joshua Laughner[5], Frank Hase[6], Darko Dubravica[6] and Mahesh Kumar Sha[7], (1)National Institute of Standards and Technology Gaithersburg, Gaithersburg, MD, United States, (2)University of Oklahoma, School of Meteorology, Norman, United States, (3)University of Toronto, Department of Physics, Toronto, ON, Canada, (4)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (5)NASA Jet Propulsion Laboratory, Pasadena, United States, (6)Karlsruhe Institute of Technology, Institute of Meteorology and Climate Research (IMK-ASF), Karlsruhe, Germany, (7)Belgisch Instituut voor Ruimte-Aeronomie, Brussel, Belgium
Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

A14C
Advances of Remote Sensing Inversion III Oral
Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France, Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK, United States, Reed Espinosa, NASA Goddard Space Flight Center, Greenbelt, United States and Jean-Claude Roger, University of Maryland College Park, Department of Geographical Sciences, College Park, MD, United States
Session Proposal
- *Monday, 9 December 2024*
- *16:00 – 17:30*
- *152 A (Convention Center)*

Assessing the Global Variability in Wildfire Aerosol and Black Carbon Using AERONET and MERRA-2
Abdulamid Fakoya[1], Logan T Mitchell[1], Jeffrey Lee[1], Lan Gao[1], Ian Chang[2], Connor J. Flynn[1], Marcela Loría-Salazar[1] and Jens Redemann[1], (1)University of Oklahoma, School of Meteorology, Norman, United States, (2)University of North Carolina at Charlotte, Earth, Environmental, and Geographical Sciences, Charlotte, NC, United States
Abstract
- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Closure of Aerosol Radiative Properties from ORACLES 4STAR and In Situ Measurements – Implications for AERONET QC Requirements
Logan T Mitchell[1], Connor J. Flynn[1], Jens Redemann[1], Kristina Pistone[2,3] and Samuel LeBlanc[2,3], (1)University of Oklahoma, School of Meteorology, Norman, United States, (2)NASA Ames Research Center, Moffett Field, United States, (3)Bay Area Environmental Research Institute, Moffett Field, United States
Abstract
- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Seasonality and Diurnality in Carbon Fluxes Across Climate Gradients Inferred from Eddy Covariance Flux Tower Networks and Geostationary Satellite Observations
Taejin Park[1], Hirofumi Hashimoto[1], Weile Wang[2], Xiangming Xiao[3], Rodrigo Vargas[4] and Ian G Brosnan[5], (1)NASA Ames Research Center, Moffett Field, CA, United States, (2)NASA/AMES Research Center, Moffett Field, United States, (3)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, (4)University of Delaware, Plant and Soil Sciences, Newark, DE, United States, (5)NASA Ames Research Center, Earth Science Division, Moffett Field, CA, United States
Abstract
- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Machine Learning for Earthquake Detection and Analysis: Improving the Accuracy and Completeness of the Hispaniola Seismic Catalog

Luis F Muñoz Santos[1,2], Jacob I Walter[3], Jay Pulliam[2], Jottin Leonel[4] and Eugenio Polanco[4], (1)University of Oklahoma, School of Geoscience, Norman, United States, (2)Baylor University, Department of Geosciences, Waco, United States, (3)University of Oklahoma, Oklahoma Geological Survey, Norman, United States, (4)Universidad Autónoma de Santo Domingo, National Center for Seismology, Santo Domingo, Dominican Republic

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Investigation of Smoke Aerosol Optical Properties from Long-range Transport Sources to the Southern Great Plains United States (2012-2023)

Hayden Webb, Kyle Eskew, Connor J. Flynn and Marcela Loría-Salazar, University of Oklahoma, School of Meteorology, Norman, United States

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

A Novel Classification for Slow Antenna Waveforms

Cooper Gray[1], Eric C Bruning[1], Dr. Kelcy N Brunner[1], David Singewald[2], Shravani Koli[2], Vanna Chmielewski[3] and Michael Stock[4], (1)Texas Tech University, Lubbock, TX, United States, (2)Texas Tech University, Lubbock, United States, (3)NOAA / OAR / National Severe Storms Laboratory, Norman, United States, (4)Cooperative Institute for Severe and High-Impact Weather Research and Operations, Norman, United States

Abstract

- *Monday, 9 December 2024*
- *08:30 -12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

A14G-03

Synoptic Modulation on Mesoscale Convective Systems and Diurnal Cycle of Rainfall over Western Coastal West Africa

Shun-Nan Wu, University of Oklahoma, Oklahoma, United States, Naoko Sakaeda, University of Oklahoma Norman Campus, School of Meteorology, Norman, United States, Elinor R Martin, University of Oklahoma, School of Meteorology, Norman, United States and Rosimar Rios-Berrios, National Center for Atmospheric Research, Boulder, CO, United States

Abstract

- *Monday, 9 December 2024*
- *16:06 – 16:09*
- *eLightning Theater 1 (Convention Center)*

AE 14A-03

Remote Measurements of Continuing Current Using ELF/VLF Magnetic Sensor

Yanan Zhu[1], Michael Stock[2,3], Jeff Lapierre[4], Elizabeth DiGangi[5] and Jacquelyn Ringhausen[4], (1)Earth Networks Inc., Germantown, MD, United States, (2)University of Oklahoma Norman Campus, Norman, United States, (3)Cooperative Institute for Severe and High-Impact Weather Research and Operations, Norman, United States, (4)AEM, Research & Development, Germantown, United States, (5)Earth Networks Inc., Research and Development, Germantown, United States

Abstract

- *Monday, 9 December 2024*
- *16:20 – 16:30*
- *University of DC & Catholic (Marriot Marquis)*

H14D-08
Evapotranspiration in Rainfed and Irrigated Alfalfa in the U.S. Southern Great Plains
Pradeep Wagle[1], Afshin Shayeghi[2], Nishan Bhattarai[2], Brian K Northup[3], Corey Moffet[4], Stacey Gunter[5] and Rudra Baral[6], (1)USDA, USDA-ARS, El Reno, OK, United States, (2)University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (3)USDA-ARS, El Reno, OK, United States, (4)USDA-ARS, Southern Plains Range Research Station, Woodward, OK, United States, (5)USDA-ARS, Woodward, OK, United States, (6)University of Missouri Columbia, Columbia, United States
Abstract
- *Monday, 9 December 2024*
- *17:10 – 17:20*
- *143 A-C (Convention Center)*

A13H-08
MAIA Aerosol Retrieval: Algorithm Tests and Improvements
Wenzhi Zhang[1], Feng Xu[2], Benting Chen[1], Taozhong Huang[3], Ethan Stroberg[1], David J Diner[4], Michael A Bull[5], James McDuffie[5], Marcin L Witek[4], Michael J Garay[6], Olga V. Kalashnikova[4] and Alexei Lyapustin[7], (1)University of Oklahoma, Norman, United States, (2)University of Oklahoma, School of Meteorology, Norman, OK, United States, (3)The University of Oklahoma, School of Meteorology, Norman, OK, United States, (4)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States, (5)NASA Jet Propulsion Laboratory, Pasadena, CA, United States, (6)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, United States, (7)NASA Goddard Space Flight Center, Greenbelt, United States
Abstract
- *Monday, 9 December 2024*
- *15:22 – 15:31*
- *152 A (Convention Center)*

The Observed Effects of Cold Pools on Convection Triggering and Organization During DYNAMO/AMIE
Naoko Sakaeda, University of Oklahoma Norman Campus, Norman, OK, United States and Giuseppe Torri, University of Hawai'i at Mānoa, Atmospheric Sciences, Honolulu, United States
Abstract
- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Investigating the Effects of Common Forward Model Errors in Aerosol Retrievals of Synergistic Lidar and Polarimeter Observations
Reed Espinosa[1], Anin Puthukkudy[2,3], Greema Regmi[2], Nirandi Jayasinghe[2], Oleg Dubovik[4], Anton Lopatin[5], Pavel Lytvynov[5], Daniel J Miller[1], Adeleke Ademakinwa[2], Zhibo Zhang[6], Jose Vanderlei Martins[2,3], Kirk D Knobelspiesse[7], Feng Xu[8] and Jeffrey S. Reid[9], (1)NASA Goddard Space Flight Center, Greenbelt, United States, (2)University of Maryland Baltimore County, Department of Physics, Baltimore, United States, (3)Earth and Space Institute, Baltimore, United States, (4)Laboratoire d'Optique Atmosphérique, Villeneuve d'Ascq, France, (5)GRASP SAS, Remote Sensing Developments, Lille, France, (6)University of Maryland Baltimore County, Department of Physics, Baltimore, MD, United States, (7)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (8)University of Oklahoma, School of Meteorology, Norman, OK, United States, (9)Naval Research Laboratory, Marine Meteorology Division, Monterey, United States

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Leveraging Computer Vision Algorithms for Enhanced Data Quality Control at the Atmospheric Radiation Measurement (ARM) User Facility

Mia Li, University of Oklahoma, Norman, Oklahoma, UNITED STATES

Abstract

- *Monday, 9 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

The impact of Anthropause During COVID-19 on the Activity of Avian Influenza Host Birds

Qiang Zhang[1,2], Jinwei Dong[1] and Xiangming Xiao[3], (1)Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, (2)University of Chinese Academy of Sciences, Beijing, China, (3)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States

Abstract

- *Monday, 9 December 2024*
- *08:00 – 17:30*
- *iPoster Gallery (Online)*

B12C-05

An improved stable boundary layer filtering protocol for eddy covariance towers based on wind speed and net radiation.

Greg Newman, University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States, Xiangming Xiao, University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States and Otavio Acevedo, University of Oklahoma Norman Campus, School of Meteorology, Norman, United States

Abstract

- *Monday, 9 December 2024*
- *11:00 – 11:10*
- *150 B (Convention Center)*

H14F-08

Integrating headwater stream network expansion-contraction dynamics into hydro-biogeochemical predictions

Alex Webster[1], Manuela Londono[2], Jazzmyn Luna[3], William Mejía[3], Joanna Blaszczak[4], Dre Presswood[4], Mengye Chen[5], Yang Hong[6], Arial J. Shogren[7], Andrew Ali[7], Shannon Speir[8], Kathleen Cutting[8], Alana Strauss[8], Adam S Wymore[9] and Juan Pesantez[9], (1)University of New Mexico, Department of Biology, Albuquerque, United States, (2)University of New Mexico Main Campus, Biology, Albuquerque, United States, (3)University of New Mexico Main Campus, Albuquerque, United States, (4)University of Nevada Reno, Department of Natural Resources & Environmental Science, Reno, United States, (5)The University of Oklahoma, Center for Analysis and Prediction of Storms, Norman, United States, (6)University of Oklahoma, School of Civil Engineering and Environmental Science, Norman, United States, (7)University of Alabama, Department of Biological Sciences, Tuscaloosa, United States, (8)University of Arkansas, Fayetteville, United States, (9)University of New Hampshire, Department of Natural Resources and the Environment, Durham, United States

Abstract

- *Monday, 9 December 2024*

- *17:15 – 17:25*
- *103 A-B (Convention Center)*

Decoding global cooling signal in primary productivity records in the western Arabian Sea
Guangsheng Zhuang[1], Xiao-Lei Liu[2], Junpeng Fu[2] and Dailun Wang[1], (1)Louisiana State University, Department of Geology & Geophysics, Baton Rouge, LA, United States, (2)University of Oklahoma, School of Geosciences, Norman, United States
Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Time-Frequency Analysis of GPS Displacements for Monitoring Changes in Aquifers and Geothermal Fields in California
Jacqueline SIlva[1], Jose Viteri Lopez[2] and Junle Jiang[2], (1)University of Texas at El Paso, El Paso, TX, United States, (2)University of Oklahoma Norman Campus, School of Geosciences, Norman, United States
Abstract

- *Monday, 9 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

H14H-01
A Diagnosis of IMERG-GMI Oceanic Precipitation
Daniel Watters[1], George John Huffman[2], Patrick N Gatlin[3], Pierre-Emmanuel Kirstetter[4,5], David T Bolvin[6,7], Robert Joyce[6,7], Eric Nelkin[6,7], Jackson Tan[2,8] and David B Wolff[9], (1)University of Oklahoma Norman Campus, Advanced Radar Research Center, Norman, United States, (2)NASA Goddard Space Flight Center, Greenbelt, MD, United States, (3)NASA Marshall Space Flight Center, Huntsville, AL, United States, (4)University of Oklahoma, School of Meteorology and School of Civil Engineering and Environmental Science, Norman, United States, (5)NOAA/National Severe Storms Laboratory, Norman, United States, (6)Science Systems and Applications, Inc., Lanham, United States, (7)NASA Goddard Space Flight Center, Greenbelt, United States, (8)University of Maryland Baltimore County, Baltimore, United States, (9)NASA GSFC/WFF Code 610.W, Wallops Island, United States
Abstract

- *Monday, 9 December 2024*
- *16:00 – 16:10*
- *147 A (Convention Center)*

SY12B-02
Enhancing Severe Weather Risk Communications with Artificial Intelligence
Adam Clark[1], David Harrison[2], Thea Sandmael[2], Kristin M Calhoun[3], Eric Loken[2], Michael Hosek[4], Aaron Hill[5], Kimbertly A. Hoogewind[6], Montgomery Flora[7], Corey Potvin[8] and Israel L Jirak[9], (1)NOAA/OAR/National Severe Storms Laboratory, Norman, OK, Norman, OK, United States, (2)Cooperative Institute for Severe and High Impact Weather Research and Operations, Norman, United States, (3)University of Oklahoma Norman Campus, Cooperative Institute for Mesoscale Meteorological Studies, Norman, United States, (4)School of Meteorology, University of Oklahoma, Norman, United States, (5)Texas Tech University, Lubbock, United States, (6)OU CIWRO and NSSL, Norman, United States, (7)University of Oklahoma, School of Meteorology, Norman, OK, United States, (8)NOAA / OAR / National Severe Storms Laboratory, Norman, OK, United States, (9)NOAA/NWS/Storm Prediction Center, Norman, OK, United States
Abstract

- *Monday, 9 December 2024*

- *10:35 – 10:45*
- *Independence A-C (Marriot Marquis)*