THURSDAY, 15 DECEMBER

B41G-01 - Asynchrony of Spaceborne Chlorophyll Fluorescence and the Near Infrared Reflectance of Vegetation in Tropical Forests

Russell Doughty[1], Luis Guanter[2], Nicholas Parazoo[3], Joanna Joiner[4], Troy Magney[5], Jennifer E Johnson[6], Philipp Köhler[7], Christian Frankenberg[8], Xiangming Xiao[9], Zoe Pierrat[10], Yujie Wang[11], Andrew Maguire[12], Alexander Norton[13], Peter Somkuti[14], Shuang Ma[13], Yuanwei Qin[15], Alexander J Turner[16], Sean Crowell[17] and Berrien Moore III[18], (1)University of Oklahoma Norman Campus, Norman, OK, (2)Research Institute of Water and Environmental Engineering (IIAMA), Universitat Politècnica de València, Valencia, Spain, (3)Jet Propulsion Laboratory (JPL), Pasadena, CA, (4)NASA GSFC, Greenbelt, MD, (5)University of California Davis, Department of Plant Sciences, Davis, CA, (6)Carnegie Institution for Science, Stanford, CA, (7)EUMETSAT, Remote Sensing and Products Division, Darmstadt, Germany, (8)NASA Jet Propulsion Laboratory, Pasadena, CA, (9)Department of Microbiology and Plant Biology, Center for Spatial Analysis, University of Oklahoma, Norman, OK, (10)University of California Los Angeles, Los Angeles, CA, (11)California Institute of Technology, Pasadena, CA, (12)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (13)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (14)University of Oklahoma Norman Campus, Department of Meteorology, Norman, OK, (15)University of Oklahoma, Department of Microbiology and Plant Biology, Norman, OK, (16)University of Washington, Department of Atmospheric Sciences, Seattle, WA, (17)University of Oklahoma, Norman, OK, (18)University of Oklahoma, School of Meteorology, Norman, OK

- *Thursday, 15 December 2022*
- *08:02 - 08:12*
- *Online Only*

A42R-1938 - Overview of Purdue's Mobile Disdrometer Operations in PERiLS 2022

Daniel Thomas Dawson II[1], Qin Jiang[2], Jacob Bruss[1], Matthew Graber[1], Funing LI[2], Hamid Ali Syed[1], Faith Mary Vendl[1], Quinn Asher Wilson[1], Michael I Biggerstaff[3] and Sean Waugh[4], (1)Purdue University, Earth, Atmospheric, and Planetary Sciences, West Lafayette, IN, (2)Purdue University, Earth, Atmospheric, and Planetary Sciences, West Lafayette, IN, (3)University of Oklahoma Norman Campus, Norman, OK, (4)NOAA/NSSL, Norman, OK

- *Thursday, 15 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

A42E - Boundary Layer Processes and Turbulence III Oral Session

Scott Salesky, University of Oklahoma, School of Meteorology, Norman, OK, Marco Giovanni Giometto, Columbia University, Civil Engineering and Engineering Mechanics, New York, NY, Shane Mayor, California State University Chico, Earth and Environmental Sciences, Chico, CA, and Paola Crippa, University of Notre Dame, Department of Civil and Environmental Engineering and Earth Sciences, Notre Dame, IN

- *Thursday, 15 December 2022*
- *09:00 - 10:30*
- *McCormick Place - E353ab (Lakeside, Level 3)*

B42J-1749 - Annual Maps of Surface Water Body, Paddy Rice, and Wetlands in Northeast China Using PALSAR, Sentinel-1, Sentinel-2, Landsat, and MODIS Imagery in 2020

Chenchen Zhang[1], Xiangming Xiao[2], Yuanwei Qin[3] and Xuebin Yang[1], (1)University of Oklahoma Norman Campus, Norman, OK, (2) Microbiology and Plant Biology, Center for Spatial Analysis, University of Oklahoma, Norman, OK, (3)University of Oklahoma Norman Campus, Norman, OK

- *Thursday, 15 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

B42K-1757 - North American Methane enhancements as seen by TROPOMI; Model-data comparison and validation with TCCON observations

Nalini Krishnankutty[1], Sean Crowell[2], Xiaoming Hu[3] and Peter Somkuti[1], (1)Univ of Oklahoma Norman Campus, Department of Meteorology, Norman, OK, (2)Univ of Oklahoma, Norman, OK (3) Univ of Oklahoma, Norman, OK

- *Thursday, 15 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

H42K-1421 - Improving Sub-seasonal to Seasonal Forecast for Better Predictions upon the Occurrence of Extreme Precipitation Events over the Contiguous United States

Lujun Zhang[1], Tiantian Yang[1], Shang Gao[1], Yang Hong[1], Qin Zhang[2], Xin Wen[3] and Chuntian Cheng[4], (1)University of Oklahoma, School of Civil Engineering and Environmental Science, Norman, OK, (2)NOAA Climate Prediction Center, College Park, MD, (3)Hohai University, College of Water Conservancy and Hydropower Engineering, Nanjing, China, (4)Dalian University of Technology, Institute of Hydropower and Hydroinformatics, Dalian, China

- *Thursday, 15 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

GH42B-03Mapping the Thermal Potential for Urban Malaria Transmission with Satellite Earth Observations

Michael C Wimberly[1], Mercedes Pascual[2], Nikhil Poudyal[1] and Courtney C Murdock[3], (1)University of Oklahoma, Geography and Environmental Sustainability, Norman, OK, (2)University of Chicago, Chicago, IL, (3)Cornell University, Entomology, Ithaca, NY

- *Thursday, 15 December 2022*
- *09:20 - 09:30*
- *McCormick Place - E253ab (Lakeside, Level 2)*

A42A-03Spatiotemporal Gap-Filling of NASA Satellite-Derived-AOD in the Western U.S. using Machine Learning Techniques

Jeffrey Lee[1], Heather Holmes[2] and Marcela Loría-Salazar[1], (1)University of Oklahoma, School of Meteorology, Norman, OK, (2)University of Utah, Dept of Chemical Engineering, Salt Lake City, UT

- *Thursday, 15 December 2022*
- 09:22 - 09:32
- *McCormick Place - E451b (Lakeside, Level 4)*

A42E-06Turbulent Coherent Structures in the Stable Atmospheric Boundary Layer: A Large-Eddy Simulation Study

Brian R Greene and Scott Salesky, University of Oklahoma, School of Meteorology, Norman, OK

- *Thursday, 15 December 2022*
- *09:55 - 10:05*
- *McCormick Place - E353ab (Lakeside, Level 3)*

A42E-07Uniform Momentum and Temperature Zones in the Convective Boundary Layer

Scott Salesky, University of Oklahoma Norman Campus, Norman, OK

- *Thursday, 15 December 2022*
- *10:05 - 10:15*
- *McCormick Place - E353ab (Lakeside, Level 3)*

A43B-01Notable Impact of Wildfires in the Western US on Weather Hazards in the Central US (Invited)

Jiwen Fan[1], Yuwei Zhang[2], ManishKumar Shrivastava[1], Cameron R Homeyer[3], Yuan Wang[4] and John Seinfeld[5], (1)Pacific Northwest National Laboratory, Richland, WA, (2)Pacific Northwest National Laboratory, Richland, WA, (3)University of Oklahoma, School of Meteorology, Norman, OK, (4)California Institute of Technology, Division of Geological and Planetary Sciences, Pasadena, CA, (5)California Institute of Technology, Pasadena, CA

- *Thursday, 15 December 2022*
- *11:00 - 11:10*
- *McCormick Place - E350 (Lakeside, Level 3)*

A43C - Boundary Layer Processes and Turbulence IV Oral Session
Scott Salesky, University of Oklahoma, School of Meteorology, Norman, OK, Marco Giovanni Giometto, Columbia University, Civil Engineering and Engineering Mechanics, New York, NY, Shane Mayor, California State University Chico, Earth and Environmental Sciences, Chico, CA, and Paola Crippa, University of Notre Dame, Civil and Environmental Engineering and Earth Sciences, Notre Dame, IN

- *Thursday, 15 December 2022*
- *11:00 - 12:30*
- *McCormick Place - E353ab (Lakeside, Level 3)*

A45E - Boundary Layer Processes and Turbulence V Oral Session
Scott Salesky, University of Oklahoma, School of Meteorology, Norman, OK, Marco Giovanni Giometto, Columbia University, Civil Engineering and Engineering Mechanics, New York, NY, Shane Mayor, California State University Chico, Earth and Environmental Sciences, Chico, CA, Paola Crippa, University of Notre Dame, Notre Dame, IN, and Branko Kosovic, National Center for Atmospheric Research, Boulder, CO

- *Thursday, 15 December 2022*
- *14:45 - 16:15*
- *McCormick Place - E353ab (Lakeside, Level 3)*

A45M-2022 - Experiment of Sea Breeze Convection, Aerosols, Precipitation and Environment (ESCAPE)
Pavlos Kollias[1,2], Greg M McFarquhar[3], Mengistu Wolde[4], Paul Lawson[5], David Joseph Bodine[6], Roelof T Bruintjes[7], Eric C Bruning[8], V. Chandrasekar[9], Paul J DeMott[10], Andrew Dzambo[3], Michael P Jensen[2], Matthew R Kumjian[11], Katia Lamer[12], Zachary J Lebo[13], Timothy Logan[14], Kelly Lombardo[11], Edward P Luke[2], Mariko Oue[1], Gregory C Roberts[15], Raymond A Shaw[16], Jeffrey Snyder[17], Susan C van den Heever[10], Nithin Allwayin[16], Ben Ascher[18], Jason Barr[1], Kenny Bala[19], Natalia Bliankinshtein[20], Anthony Brown[21], Kelcy N Brunner[8], Zackary Mages[1], Christina S McCluskey[22], Katherine McKeown[23], Erin Leghart[24], Leonid Nichman[25], Miles Litzmann[26], Cuong Nguyen[20], Ryan J Patnaude[27], Saurabh Patil[28], Russell Perkins[10], Peisang Tsai[22], Keyvan Ranjbar[29], Elise Rosky[30], Bernat P Treserras[31], Kristofer Tuftedal[32] and Cory Wolff[33] (1)Stony Brook Univ, Stony Brook, NY, (2)Brookhaven National Laboratory, Upton,NY, (3)Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, OK (4)National Research Council Canada, Ottawa, ON, Canada, (5)SPEC Inc, Boulder, CO, (6)Univ of Oklahoma, Advanced Radar Research Center, Norman, OK, (7)National Center for Atmospheric Resesarch, Boulder, CO, (8)Texas Tech University, Lubbock, TX, (9)Colorado State Univ, Electrical and Computer Engineering, Fort Collins, CO, (10)Colorado State Univ, Department of Atmospheric Science, Fort Collins, CO, (11)Pennsylvania State Univ, University Park, PA, (12)Brookhaven National Laboratory, Brookhaven, NY, (13)Univ of Wyoming, Atmospheric Science, Laramie, WY, (14)Texas A & M Univ, College Station, TX, (15)Scripps Institution of Oceanography, La Jolla, CA, (16)Michigan Technological Univ, Houghton, MI, (17)National Severe Storms Lab Norman, Norman, OK, (18)Colorado State Univ, Department of Atmospheric Sciences, Ft. Collins, CO, (19)National Research Council Canada, Ottawa, Canada, (20)National Research Council Canada, Flight Research Laboratory, Ottawa, ON, Canada, (21)National Research Council - Canada, Ottawa, ON, Canada, (22)University Corporation for Atmospheric Research, Boulder, CO, (23)Pennsylvania State Univ Main Campus, Meteorology and Atmospheric Science, State College, PA, (24)Stony Brook University, Division of Atmospheric Sciences, Stony Brook, NY, (25)National Research Council of Canada, Ottawa, ON, Canada, (26)Stony Brook Univ, Atmospheric Sciences, Stony Brook, NY, (27)Colorado State Univ, Fort Collins, CO, (28)Univ of Oklahoma, School of Meteorology, Norman, OK, (29)National Research Council of Canada, Ottawa, Canada, (30)Michigan Technological Univ, Houghton, MI, (31)McGill Univ, Montreal, Canada, (32)Stony Brook University, Stony Brook, NY, (33)National Center for Atmospheric Research, Earth Observing Laboratory, Boulder, CO

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

B45L-1872Impacts of Warming on Carbon Fluxes from Individuals to Ecosystems
Rose Brinkhoff, Univ of Michigan Ann Arbor, Ann Arbor, MI, Aimee Classen, Univ of Michigan Ann Arbor, Ann Arbor, MI, Nathan Sanders, Univ of Michigan, Ann Arbor, MI, Nicholas G Smith, Purdue Univ, West Lafayette, IN, Lara Souza, Univ of Oklahoma, Norman, OK, and Mark Joseph Hovenden, Univ of Tasmania, Hobart, TAS, Australia

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

GC45E-1020Glycosidases Facilitated Soil Organic Carbon and Total Nitrogen Sequestrations under Intensive Fertilization
Xuehan Wang[1], Jianwei Li[1], Siyang Jian[2] and Lahiru Gamage[1], (1)Tennessee State University, Nashville, TN, (2)University of Oklahoma, Institute for Environmental Genomics, Department of Microbiology and Plant Biology, Norman, OK

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

GH45B-0677Effects of Different Environmental Data Sources on West Nile Virus Forecasting Accuracy from Arbovirus Monitoring and Prediction (ArboMAP) in Multiple US States
Dawn M Nekorchuk, University of Oklahoma, Geography and Environmental Sustainability, Norman, OK, Anita Bharadwaja, South Dakota Department of Health, Sioux Falls, SD, Julia Field, Michigan Department of Health and Human Services, Lansing, MI, Caio Martinelle B. de Franca, Southern Nazarene University, Biology, Bethany, OK, Kimberly Signs, Michigan Department of Health and Human Services, Lansing, MI, Sean Simonson, Louisiana Department of Health, New Orleans, LA and Michael C Wimberly, University of Oklahoma, Norman, OK

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

MR45B-0090Ultrasonic Velocity Anisotropy in Crystalline Basement Rocks of the Central United States
William M Kibikas, Sandia National Laboratories, Albuquerque, NM, Jacob I Walter, Oklahoma Geological Survey, Leonard, OK, Ahmad Ghassemi, University of Oklahoma Norman Campus, Mewbourne College of Petroleum and Geological Engineering, Norman, OK, and Brett M Carpenter, University of Oklahoma, School of Geosciences, Norman, OK

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

PP45C-1155Assessment of Drought Characteristics of the Past Millennium using a High Resolution PMIP4 Model
Stuart Edris, Norman, OK, Jeffrey B Basara, University of Oklahoma, School of Meteorology; School of Civil Engineering and Environmental Science, Norman, OK, Jordan I Christian, University of Oklahoma, School of Meteorology, Norman, OK, Jason C Furtado, University of Oklahoma, School of Meterology, Norman, OK, Amy McGovern, University of Oklahoma, Computer Science; School of Meteorology, Norman, OK and Xiangming Xiao, Department of Microbiology and Plant Biology, Center for Spatial Analysis, University of Oklahoma, Norman, OK

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

S45E-0209Investigation of the Teleseismic Event Record by Distributed Acoustic Sensing Array: Teleseismic Receiver Function Analysis Using DAS and Broadband Station
Zhuobo Wang, University of Oklahoma Norman Campus, Norman, OK, and Xiaowei Chen, University of Oklahoma, School of Geosciences, Norman, OK

- *Thursday, 15 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

A46C - Boundary Layer Processes and Turbulence VI Oral Session
Scott Salesky, University of Oklahoma, School of Meteorology, Norman, OK, Marco Giovanni Giometto, Columbia University, Civil Engineering and Engineering Mechanics, New York, Shane Mayor, California State University Chico, Earth and Environmental Sciences, Chico, CA, and Paola Crippa, University of Notre Dame, Notre Dame, IN

- *Thursday, 15 December 2022*
- *16:45 - 18:15*
- *McCormick Place - E353ab (Lakeside, Level 3)*

T46B-04Continental rifting in the South China Sea through extension and high heat flow: An extended history

Alex Burton-Johnson, NERC British Antarctic Survey, Cambridge, UK and Andrew Cullen, University of Oklahoma Norman Campus, Norman, OK

- *Thursday, 15 December 2022*
- *17:15 - 17:25*
- *McCormick Place - S104a (South, Level 1)*