FRIDAY, 16 DECEMBER

[A51A - Advances of Atmospheric Remote Sensing Inversion I Online Poster Discussion](#)

Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France, Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK, Reed Espinosa, University of Maryland Baltimore County, Physics, Baltimore, MD and Meng Gao, SSAI, NASA Goddard Space Flight Center, Greenbelt, MD

- *Friday, 16 December 2022*
- *08:00 - 09:00*
- *Online Only*

[A52I-1075 - An Correlation-based Inversion Method for Aerosol Remote Sensing and Test Using AERONET and POLDER Measurements](#)Taozhong Huang[1], Feng Xu[2], Jens Redemann[3], Lan Gao[3], Meng Gao[4] and Oleg Dubovik[5], (1)The University of Oklahoma, School of Meteorology, Norman, OK, (2)University of Oklahoma, School of Meteorology, Norman, OK, (3)University of Oklahoma, School of Meteorology, Norman, OK, (4)SSAI, NASA Goddard Space Flight Center, Greenbelt, MD (5)Laboratoire d'Optique Atmosphérique, CNRS/University of Lille, Lille, France

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[A52I-1076Multi-Angle Imager for Aerosols (MAIA) Level-2 Aerosol Inversion Algorithm Testing Using AirMSPI and POLDER Measurements](#)
Benting Chen[1], Feng Xu[2], Olga V. Kalashnikova[3], David J Diner[3], James McDuffie[4] and Oleg Dubovik[5], (1)University of Oklahoma, Norman, OK, (2)University of Oklahoma, School of Meteorology, Norman, OK, (3)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (4)NASA Jet Propulsion Laboratory, Pasadena, CA, (5)Laboratoire d'Optique Atmosphérique, CNRS/University of Lille, LIlle, France

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[A52I-1077A Markov chain model for polarized radiative transfer in the thermal infrared and application in dust particle inversion](#)
Feng Xu[1], Reed Espinosa[2], Benting Chen[3], Olga V. Kalashnikova[4], Lan Gao[5], Michael J Garay[6], Jens Redemann[5], Oleg Dubovik[7] and Zhao-Cheng Zeng[8], (1)University of Oklahoma Norman Campus, School of Meteorology, Norman, OK, (2)Joint Center for Earth Systems Technology, UMBC, Baltimore, MD, (3)University of Oklahoma, Norman, OK, (4)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (5)University of Oklahoma, School of Meteorology, Norman, OK, (6)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (7)Laboratoire d'Optique Atmosphérique, CNRS/University of Lille, LIlle, France, (8)Jet Propulsion Laboratory, Pasadena, CA

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[A52I-1082Grand challenges in satellite remote sensing](#)
Oleg Dubovik, Laboratoire d'Optique Atmosphérique, CNRS/University of Lille, Lille, France, Gregory L Schuster, NASA Langley Research Center, Hampton, VA, Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK, Yongxiang Hu, NASA Langley Research Center, Hampton, VA, Hartmut Boech, University of Leicester, Leicester, United Kingdom, Jochen Landgraf, SRON Netherlands Institute for Space Research, Utrecht, Netherlands and Zhengqiang Li, Aerospace Information Research Institute, Chinese Academy of Sciences, Beijing, China

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[B52D-0870Incorporation of Microbial Communities into Reactive Transport Modeling of Nitrogen in Subsurface Systems under Rainfall Perturbations](#)

Jinwoo Im[1], Andrew Putt[2], Kathleen F Walker[2], James Marquis[3], Lauren M Lui[1], Alex Carr[4], Yupeng Fan[5], Jennifer Goff[6], Kristopher Hunt[7], Jonathan Michael[5], Farris Poole[8], Yajiao Wang[5], Michael Adams[8], Nitin S. Baliga[4], David Stahl[7], Jizhong Zhou[5], Matthew W. Fields[3], Terry Hazen[2,9], Adam P Arkin[1,10] and Michelle E Newcomer[11], (1)Lawrence Berkeley National Laboratory, Berkeley, CA, (2)University of Tennessee, Knoxville, TN, (3)Montana State University, Bozeman, MT, (4)Institute for Systems Biology, Seattle, WA, (5)University of Oklahoma, Norman, OK, (6)University of Georgia, Athens, GA, (7)University of Washington, Seattle, WA, (8)University of Georgia, Athens, GA, (9)Oak Ridge National Lab, Oak Ridge, TN, (10)University of California, Berkeley, CA, (11)Lawrence Berkeley National Laboratory, Berkeley, CA

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

[B52G-0894Patterns and drivers of recent disturbance in tropical forest reserves of Southwestern Ghana](#)

Dan Wanyama, University of Oklahoma Norman Campus, Geography and Environmental Sustainability, Norman, OK, Michael C Wimberly, University of Oklahoma Norman Campus, Norman, OK, and Foster Kwame Mensah, Center for Remote Sensing and Geographic Information Services (CERSGIS), University of Ghana, Legon, Accra, Ghana

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level)*

[B52G-0899 - Large Loss and Rapid Recovery of Vegetation Cover and Aboveground Biomass Over Forest Areas in Australia during 2019-2020](#)

Yuanwei Qin, University of Oklahoma Norman Campus, Norman, OK, Xiangming Xiao, Department of Microbiology and Plant Biology, Center for Spatial Analysis, University of Oklahoma, Norman, OK, Wigneron Jean-Pierre, ISPA, UMR 1391, INRA Nouvelle-Aquitaine, Villenave-d'Ornon, France, Philippe Ciais, Laboratoire des Sciences du Climat et de l'Environnement, Gif-Sur-Yvette, France, Josep Gili Canadell, CSIRO Oceans and Atmosphere, Canberra, Australia, Martin Brandt, University of Copenhagen, Department of Geosciences and Natural Resource Management, København K, Denmark, Xiaojun Li, Inrae, Bordeaux, France, Lei Fan, Southwest University, Chongqing, China, Xiaocui Wu, University of Illinois, Urbana-Champaign, IL, Hao Tang, National University of Singapore, Geography, Singapore, Singapore, Ralph Dubayah, Univ Maryland, College Park, MD, Russell Doughty, California Institute of Technology, Pasadena, CA, Sean Crowell, University of Oklahoma, Norman, OK, Bo Zheng, Tsinghua Shenzhen International Graduate School, Shenzhen, China and Berrien Moore III, University of Oklahoma, School of Meteorology, Norman, OK

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

[GC52H - Global Changing Environment and Human Well-being: Impact, Policy, and Scientific Challenges I Poster](#)

Mengye Chen, University of Oklahoma Norman Campus, School of Civil Engineering and Environmental Science (CEES), Norman, OK, Ghassem Asrar, Universities Space Research Association, Columbia, NY, Yuyu Zhou, Iowa State University, Dept. of Geological & Atmospheric Sciences, Ames, IA, Min Chen, Pacific Northwest National Laboratory, Joint Global Change Research Institute, Richland, WA; University of Wisconsin Madison, Forest and Wildlife Ecology, Madison, WI, Jiaqi Zhang, University of Texas at Arlington, Civil Engineering, Arlington, TX, Shang Gao, University of Oklahoma, School of Civil Engineering and Environmental Science, Norman, OK, Mani Rouhi Rad, Texas A&M University College Station, Department of Agricultural Economics, College Station, TX, Chiyu Niu, The World Bank Group, Poverty and Equity Global Practice, Washington, DC, Yongjie Huang, School of Meteorology, University of Oklahoma, Norman, OK, and Amir Sapkota, University of Maryland College Park, School of Public Health, College Park, MD

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[H52H-0554](#)The influence of magnetic minerals on induced polarization measurements in sedimentary rocks

Klaudio Peshtani, Rutgers University Newark, Earth & Environmental Sciences, Newark, NJ, Andreas Weller, Technische Universität Clausthal, Clausthal, Germany, Sina Saneiyan, University of Oklahoma, School of Geosciences, Norman, OK, and Lee D Slater, Rutgers University, Earth & Environmental Sciences, Newark, NJ

- *Friday, 16 December 2022*
- *09:00 - 12:30*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

[GH52A-02](#)Spatiotemporal estimates of surface $PM_{2.5}$ concentrations in the western U.S. using NASA MODIS and VIIRS retrievals and data assimilation techniques

Sandra Marcela Loria Salazar, University of Oklahoma, School of Meteorology, Norman, OK, Jeffrey Lee, University of Oklahoma, School of Meteorology, Norman, OK, Cesunica Ivey, University of California Berkeley, Civil and Environmental Engineering, Berkeley, CA, Heather Holmes, University of Utah, Department of Chemical Engineering, Salt Lake City, UT, and Howard H. Chang, Emory University, Department of Biostatistics and Bioinformatics, Atlanta, GA

- *Friday, 16 December 2022*
- *09:15 - 09:25*
- *McCormick Place - E253ab (Lakeside, Level 2)*

[GH52A-03](#)Modeling spatiotemporal exposures of heat and wildfire smoke using atmospheric models and satellite remote sensing products

Heather Holmes[1], Kaiyu Chen[1], Jingting Huang[1], Sam Faulstich[1], Jacob Boomsma[2], Jeffrey Lee[3], Marcela Loría-Salazar[3], Lyndsey Darrow[4] and Matthew Strickland[4], (1)University of Utah, Department of Chemical Engineering, Salt Lake City, UT, (2)University of Utah, Department of Atmospheric Sciences, Salt Lake City, UT, (3)University of Oklahoma, School of Meteorology, Norman, OK, (4)University of Nevada Reno, School of Public Health, Reno, NV

- *Friday, 16 December 2022*
- *09:25 - 09:35*
- *McCormick Place - E253ab (Lakeside, Level 2)*

[B52A-05](#)Omics-enabled modeling of grassland microbial communities feedback to climate change

Jizhong Zhou[1], Siyang Jian[2], Zhifeng Yang[2], Gangsheng Wang[2], Xue Guo[3], Qun Gao[3], Zheng Shi[4] and Daliang Ning[2], (1)University of Oklahoma, Norman, OK, (2)University of Oklahoma, Institute for Environmental Genomics, Department of Microbiology and Plant Biology, Norman, OK, (3)Tsinghua University, School of Environment, Beijing, China, (4)University of Oklahoma, Institute for Environmental Genomics, Department of Microbiology and Plant Biology, Norman, OK

- *Friday, 16 December 2022*
- *09:40 - 09:50*
- *McCormick Place - S501bcd (South, Level 5)*

[A52B-08](#)Characteristics of Precipitation and MCS over the Peruvian Central Andes based on Convection-Permitting Simulations

Yongjie Huang[1], Ming Xue[2], Xiao-Ming Hu[3], Elinor R Martin[4], Hector Novoa[5], Renee A McPherson[6], Changhai Liu[7], Kyoko Ikeda[8], Roy Rasmussen[8], Andres Vitaliano Perez Pachari[5] and Isaac Yanqui Morales[5], (1)University of Oklahoma Norman Campus, Center for Analysis and Prediction of Storms (CAPS), Norman, OK, (2)Univ Oklahoma, Norman, OK, (3)University of Oklahoma Norman Campus, Center for Analysis and Prediction of Storms, Norman, OK, (4)University of Oklahoma, School of Meteorology, Norman, OK, (5)Universidad Nacional de San Agustín de Arequipa, Arequipa, Peru, (6)University of Oklahoma, Norman, OK, (7)National Center for Atmospheric Research, Boulder, CO, (8)NCAR/RAL, Boulder, CO

- *Friday, 16 December 2022*
- *10:10 - 10:20*
- *McCormick Place - E270 (Lakeside, Level 2)*

[NS53A - Near-Surface Geophysics for Characterizing and Monitoring Natural Hazards III Oral](#)
Sebastian Uhlemann, Lawrence Berkeley National Laboratory, Berkeley, CA, Sina Saneiyan, University of Oklahoma, School of Geosciences, Norman, OK, Angela Perrone, CNR Institute of Methodologies for Environmental Analysis, Potenza, Italy and Xavier Comas, Florida Atlantic University, Geosciences, Boca Raton, FL
- *Friday, 16 December 2022*
- *11:00 - 12:30*
- *McCormick Place - S104b (South, Level 1)*

[A53C-02Cloud Top Phase Characterization of Extratropical Cyclones over the Midwest and Northeast United States: Results from IMPACTS](#)
Troy Zaremba, University of Illinois at Urbana Champaign, Atmospheric Sciences, Urbana, IL, Robert Rauber, University of Illinois at Urbana-Champaign, Department of Atmospheric Sciences, Urbana, John E Yorks, SSAI/NASA GSFC, Greenbelt, MD, Greg M McFarquhar, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, OK, Stephen D Nicholls, SSAI, Greenbelt, MD and Lynn A. McMurdie, University of Washington, Seattle, WA
- *Friday, 16 December 2022*
- *11:10 - 11:20*
- *McCormick Place - E350 (Lakeside, Level 3)*

[NH53A-02Global Projections of Flash Drought in a Warming Climate](#)
Jordan I Christian[1], Elinor R Martin[1], Jeffrey B Basara[2] and Jason C Furtado[3], (1)University of Oklahoma, School of Meteorology, Norman, OK, (2)University of Oklahoma, School of Meteorology; School of Civil Engineering and Environmental Science, Norman, OK, (3)University of Oklahoma, School of Meterology, Norman, OK
- *Friday, 16 December 2022*
- *11:15 - 11:25*
- *McCormick Place - E253cd (Lakeside, Level 2)*

[MR53A-04Geodetic and Microseismic Signatures of Crustal Faulting Following Large Earthquakes](#)
Junle Jiang, University of Oklahoma Norman Campus, School of Geosciences, Norman, OK
- *Friday, 16 December 2022*
- *11:32 - 11:42*
- *McCormick Place - S105a (South, Level 1)*

[B54A-02 - High Spatial Resolution Modeling of Gross Primary Production over Sugarcane Plantations](#)
Jorge Andres Celis, University of Oklahoma Norman Campus, Norman, OK, Xiangming Xiao, Department of Microbiology and Plant Biology, Center for Spatial Analysis, University of Oklahoma, Norman, OK, Paul White, USDA ARS, Houma, LA, and Osvaldo Cabral, Embrapa Meio Ambiente, Jaguariuna, Brazil
- *Friday, 16 December 2022*
- *13:55 - 14:05*
- *Online Only*

[A54A-03Comparison of MISR's and MAIA's Observing Strategies for Mapping Speciated Particulate Matter Air Pollution](#)
David J Diner[1], Stacey W Boland[2], Carol J Bruegge[3], Kevin A Burke[3], Sina Hasheminassab[4], Veljko M Jovanovic[3], Yang Liu[5], Alexei Lyapustin[6], Saagar Patel[4], Gerard van Harten[4], Feng Xu[7] and The MAIA Team, (1)NASA Jet Propulsion Laboratory, Pasadena, CA, (2)Jet Propulsion Laboratory, Pasadena, CA, (3)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (4)NASA Jet Propulsion Laboratory, Pasadena, CA, (5)Emory University, Gangarosa Department of Environmental Health, Atlanta, GA, (6)NASA Goddard Space Flight Center, Greenbelt, MD, (7)University of Oklahoma, School of Meteorology, Norman, OK
- *Friday, 16 December 2022*
- *14:05 - 14:15*
- *Online Only*

[A55B - Advances of Atmospheric Remote Sensing Inversion III Oral](#)
Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France and Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK
- *Friday, 16 December 2022*
- *14:45 - 16:15*
- *McCormick Place - E271ab (Lakeside, Level 2)*

[A55L-1266Factors Affecting Precipitation over Western Puerto Rico during the NASA 2021 CPEX-AW Project](#)
Kevin Martinez Lopez, University of Puerto Rico Mayaguez, Geology, Mayaguez, Puerto Rico, Naoko Sakaeda, University of Oklahoma Norman Campus, School of Meteorology, Norman, OK, Shun-Nan Wu, University of Oklahoma, Norman, OK, and Elinor R Martin, University of Oklahoma, School of Meteorology, Norman, OK
- *Friday, 16 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[A55Q-1347Ground-Validation and Error Attribution of Near-Surface Air Temperature from AIRS in North America](#)
Yixin Wen[1], Shang Gao[2], Evan Fishbein[3], Bjorn Lambrigtsen[4], Chris Galli[5] and Hong Van T Dang[3], (1)University of Florida, Geography, Ft Walton Beach, FL, (2)University of Oklahoma, Civil Engineering and Environmental Science, Norman, OK, (3)JPL, Pasadena, CA (4)Jet Propulsion Lab, Pasadena, CA, (5)Synopticdata.com, Salt Lake City, UT
- *Friday, 16 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[H55L-0728Building the Aquatic Intermittency effects on Microbiomes in Streams (AIMS) network to enable understanding of how intermittent flow impacts water quality and stream microbiomes](#)
Amy J Burgin[1], Daniel C Allen[2], Connor Brown[3], Stephen C. Cook[4], Sarah Flynn[5], Brett Nave[6], Erin C Seybold[7], Logan Swenson[3], Christopher Wheeler[8], Jessica Wilhelm[3], Lydia Zeglin[9], Kaci Zarek[5], Sam C Zipper[7], Aquatic Intermittency effects on Microbiomes in Streams AIMS[5] and Aquatic Intermittency effects on Microbiomes in Streams (AIMS) Team, (1)University of Kansas, Kansas Biological Survey, Lawrence, KS, (2)University of Oklahoma Norman Campus, Biology, Norman, OK, (3)University of Kansas, Lawrence, KS, (4)University of Oklahoma Norman Campus, Norman, OK, (5)University of Kansas, Lawrence, KS, (6)Kansas State University, Division of Biology, Manhattan, KS, (7)University of Kansas, Kansas Geological Survey, Lawrence, KS, (8)Georgia State University, Atlanta, GA, (9)Kansas State University, Division of Biology, Manhattan, KS
- *Friday, 16 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

[GC55G-0302Abrupt Flash Drought: Investigating Flash Drought Occurrence over Vital Agricultural Regions](#)
Benjamin Fellman, University of Oklahoma, Norman, OK, Mari R Tye, National Center for Atmospheric Research, Boulder, CO, Jordan I Christian, University of Oklahoma, School of Meteorology, Norman, OK, and Jeffrey B Basara, University of Oklahoma, School of Meteorology; School of Civil Engineering and Environmental Science, Norman, OK
- *Friday, 16 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall A (South, Level 3)*

[GC55G-0304Comparison of Inter-Seasonal Land Surface-Atmospheric Drivers of Flash Drought Over Europe.](#)
Daniel Mesheske, University of Oklahoma Norman Campus, Civil Engineering and Environmental Science, Norman, OK, Jordan I Christian, University of Oklahoma, School of Meteorology, Norman, OK, and Jeffrey B Basara, University of Oklahoma, School of Meteorology; School of Civil Engineering and Environmental Science, Norman, OK
- *Friday, 16 December 2022*
- *14:45 - 18:15*
- *McCormick Place - Poster Hall, Hall - A (South, Level 3)*

[A55F-04Role of Tropopause Polar Vortices in Modulating Arctic Cyclone Climatology](#)
Rupsa Bhowmick[1], Darin Scott Comeau[1], John J Cassano[2], Elizabeth Cassano[3], Steven M Cavallo[4] and Wilbert Weijer[1], (1)Los Alamos National Laboratory, Los Alamos, NM, (2)Univ Colorado, Boulder, CO, (3)Cooperative Institute for Research in Environmental Sciences, Boulder, CO, (4)University of Oklahoma Norman Campus, Norman, OK

- *Friday, 16 December 2022*
- *15:15 - 15:25*
- *McCormick Place - E450a (Lakeside, Level 4)*

[GC55A-06Soil Moisture Roles and PBL Development During Flash Drought](#)
Jeffrey B Basara, University of Oklahoma Norman Campus, Norman, OK; University of Oklahoma, School of Meteorology; School of Civil Engineering and Environmental Science, Norman, OK, Ryann Wakefield, Verisk, Boston, MA, Joseph A Santanello Jr, Hydrological Sciences Laboratory, NASA/GSFC, Greenbelt, MD, Jordan I Christian, University of Oklahoma, School of Meteorology, Norman, OK, Patricia Lawston Parker, NASA GSFC, Hydrological Science Laboratory, Greenbelt, MD, and Jinwoong Yoo, University of Maryland College Park, College Park, MD

- *Friday, 16 December 2022*
- *15:42 - 15:53*
- *McCormick Place - S502ab (South, Level 4)*

[B55B-08Satellite constrained spatial distribution of dominant climatic drivers of the tropical carbon inter-annual variations](#)
Shuang Ma[1], A. Anthony Bloom[1], Alexander Norton[1], Paul Alexander Levine[1], Russell Doughty[2], Renato Kerches Braghiere[1]and Junjie Liu[1], (1)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (2)University of Oklahoma, GeoCarb Mission and the College of Atmospheric and Geographic Sciences, Norman, OK

- *Friday, 16 December 2022*
- *15:55 - 16:05*
- *McCormick Place - S501a (South, Level 5)*

[A56A-01Synergistic Lidar and Polarimeter Aerosol Retrieval Performance Under Complex Conditions: Exploring the Costs of Imperfect Particle Shape Assumptions](#) (Invited talk)
Reed Espinosa[1], Anin Puthukkudy[2], Greema Regmi[3], Nirandi Jayasinghe[4], Osku Kemppinen[5], Oleg Dubovik[6], Feng Xu[7], Anton Lopatin[8] and Pavel Lytvynov[8], (1)NASA Goddard Space Flight Center, Greenbelt, MD, (2)University of Maryland Baltimore County, Department of Physics, Earth and Space Institute, GESTAR-II, Baltimore, MD, (3)University of Maryland Baltimore County, Baltimore, MD, (4)University of Maryland Baltimore County, Physics Department, Baltimore, MD, (5)NASA Goddard Space Flight Center, Greenbelt, MD, (6)Laboratoire d'Optique Atmosphérique, CNRS/University of Lille, Lille, France, (7)University of Oklahoma, School of Meteorology, Norman, OK, (8)GRASP SAS, Remote Sensing Developments, Lille, France

- *Friday, 16 December 2022*
- *16:45 - 17:00*
- *McCormick Place - E271ab (Lakeside, Level 2)*

[GC56C - Global Changing Environment and Human Well-being: Impact, Policy, and Scientific Challenges III Oral](#)
Mengye Chen, University of Oklahoma Norman Campus, School of Civil Engineering and Environmental Science (CEES), Norman, OK, Ghassem Asrar, Universities Space Research Association, Columbia, WDC, Yuyu Zhou, Iowa State University, Dept. of Geological & Atmospheric Sciences, Ames, IA, Min Chen, Pacific Northwest National Laboratory, Joint Global Change Research Institute, Richland, WA, Jiaqi Zhang, University of Texas at Arlington, Civil Engineering, Arlington, TX, Mani Rouhi Rad, Texas A&M University College Station, Department of Agricultural Economics, College Station, TX and Shang Gao, University of Oklahoma, School of Civil Engineering and Environmental Science, Norman, OK

- *Friday, 16 December 2022*
- *16:45 - 18:15*
- *McCormick Place - S503ab (South, Level 5)*

A56A - Advances of Atmospheric Remote Sensing Inversion IV Oral Session
Oleg Dubovik, University of Lille 1, Villeneuve d'Ascq, France and Feng Xu, University of Oklahoma, School of Meteorology, Norman, OK
- *Friday, 16 December 2022*
- *16:45 - 18:15*
- *McCormick Place - E271ab (Lakeside, Level 2)*

H56B-02Divergent Floodplain Urbanization Patterns and Risks with Levee Effect
Meng Ding[1], Peirong Lin[2], Shang Gao[3], Jida Wang[1], Zhenzhong Zeng[4], Xiaogang He[5], Xudong Zhou[6], Dai Yamazaki[6], Kaihao Zheng[2], Yu Liu[2] and Yige Gao[7], (1)Kansas State University, Geography and Geospatial Sciences, Manhattan, KS, (2)Peking University, Institute of Remote Sensing and GIS, School of Earth and Space Sciences, Beijing, China, (3)University of Oklahoma, School of Civil Engineering and Environmental Science, Norman, OK, (4)Southern University of Science and Technology, Shenzhen, China, (5)National University of Singapore, Civil and Environmental Engineering, Singapore, Singapore, (6)The University of Tokyo, Institute of Industrial Science, Tokyo, Japan, (7)Gwinnett County Department of Water Resources, Atlanta, GA
- *Friday, 16 December 2022*
- *16:55 - 17:05*
- *McCormick Place - E451a (Lakeside, Level 4)*

A56A-02Solving Forward and Inverse Problems for Hyperspectral Satellite Remote Sensors using Principal Component Analysis
Xu Liu[1], Wan Wu[1], Qiguang Yang[2], Xiaozhen Xiong[3], Ming Zhao[4], Daniel K Zhou[1], Allen M Larar[5], Robert J D Spurr[6], Ping Yang[7], Liqiao Lei[8], Hyun-Sung Jang[9], Yolanda Shea[10], Snorre Stamnes[1], David R Thompson[11], Xiong Liu[12], Lihang Zhou[13], Qing Yue[11] and Feng Xu[14], (1)NASA Langley Research Center, Hampton, VA, (2)SSAI Inc, NASA Langley Research Center, Hampton, VA, (3)NOAA Science Center, National Environmental Satellite, Data, and Information Service, NOAA, Clarksville, MD, (4)SSAI, Inc., Hampton, VA, (5)NASA Langley Research Center, Hampton, VA, (6)Rt Solutions Inc., Cambridge, MA, (7)Texas A&M Univ, College Station, TX, (8)Science Systems and Applications, Inc., Hampton, VA, (9)NASA npp postdoc, Hampton, VA, (10)NASA, Hampton, VA, (11)Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA, (12)Center for Astrophysics | Harvard & Smithsonian, Cambridge, MA, (13)NOAA College Park, College Park, MD, (14)University of Oklahoma, School of Meteorology, Norman, OK
- *Friday, 16 December 2022*
- *17:00 - 17:10*
- *McCormick Place - E271ab (Lakeside, Level 2)*

MR56A-08 - Diffusivity based screening approach for seal integrity for underground gas storage.
Sidi Mamoudou[1], Judah Odiachi[1], Ali Tinni[1], Son Thai Dang[2], Carl H Sondergeld[2]and Chandra S Rai[2], (1)University of Oklahoma, Norman, OK, (2)University of Oklahoma Norman Campus, Norman, OK,
- *Friday, 16 December 2022*
- *17:57 - 18:07*
- *McCormick Place - S104b (South, Level 1)*