2024 AMS Annual Meeting

NASA Earth Science Technology Office (ESTO)

ESTO-Affiliated Presentations, Posters, and Events *(all times EST)*

Monday, January 29

Joint Session J1A (8:30-10:00, Room 320)
Advances in Cubesats and Smallsats for Observations and Measurements of Earth's Atmosphere Thermodynamic Structure and Processes, Winds, and Water Cycle Processes, and to Improve Climate Monitoring, Weather Forecasting, or Space Weather Prediction
Cochairs: Martin Yapur and Amber Emory

J1A.2, 8:45 – ***Enabling Enhanced Temporal Resolution of Observations and Retrievals of Water Vapor, Clouds and Precipitation: Recent Scientific Results from the Temporal Experiment for Storms and Tropical Systems (TEMPEST) Missions***
- Steven Reising

J1A.3, 9:00 – ***Results of the Compact Ocean Wind Vector Radiometer Demonstration Mission: A Small-Sat Conical Microwave Imager***
- Shannon Brown

J1A.5, 9:30 – ***SToRM SAR, a Multi-static Precipitation Radar Hosted by Micro-satellites: an Update on Ground-based Risk-Reduction Field-test Results and Airborne Demonstration Plans***
- Kevin Maschhoff

Session 2A (10:45-12:00, room 320)
Advances in Satellite Observations, Earth Science, and Observing Technologies That Can Complement the Heritage Observation Systems and Potentially Lead to Advances in Next Generation Observation Systems
Cochairs: Martin Yapur and Amber Emory

2A.1, 10:45 – ***A New, Compact Hyperspectral Imager for Targeted Air Pollution Remote Sensing***
- William Swartz

2A.2, 11:00 – ***Advances in Designing, Building, and Testing Configurable Reflectarrays for High-Resolution Microwave Sounding and Imaging from Small Satellite Platforms***
- William Blackwell

2A.3, 11:15 – ***The BABAR-ERI Instrument: An Innovative Solution for Imaging Broadband Radiation at High Spatial Resolution***
- Odele Coddington

2A.4, 11:30 – ***Emerging Metamaterial Technologies for Microwave Radiometer Calibration to Enhance Atmospheric Sounding and Remote Sensing of Clouds and Precipitation from Small Satellites***
- Steven Reising

2A.5, 11:45 – ***A Decade Long Mission Architecture to Provide Continuous Solar Irradiance Measurements: The Compact Total and Spectral Irradiance Sensors (CTSIS) Mission***
- Erik Richard

Presentation 3A.1 (1:45-2:00, Room 320)
Technology Progress on the Hyperspectral Microwave Photonic Instrument (HyMPI)
- Fabrizio Gambini (Antonia Gambacorta)

Presentation J3B.2 (2:00-2:15, Room 327)
Observing System Simulation Experiments to Determine the Impact of Spaceborne Differential Absorption Radar Measurements of Marine Surface Pressure on Numerical Weather Prediction
- Nikki Prive

Presentation 3.2 (2:00-2:15, Hilton Key 9)
Assessing Impacts of Hyperspectral Microwave Observations on NASA's OSSE Framework
- Narges Shahroudi (Antonia Gambacorta)

Presentation 3B.4 (2:30-2:45, Room 321/322)
Multi-Month Observations of Spatial and Temporal Variation of CH4 and CO2 in New York City Using Open-Path Measurements over Km-Scale Paths
- Kevin Cossel

Presentation J3B.5 (2:45-3:00, Room 327)
Earth-observing Photonic Integrated Circuit (EPIC) Science Instrumentation
- Máté Ádámkovics

Poster 143 (3:00-4:30, Hall E)
Enhancing Air Quality Prediction through Bias Correction using Machine Learning on CMAQ
- Quang Dang (Milt Halem)

Tuesday, January 30

Presentation 7.3 (2:45-3:00, Room 326)
Utilization of Satellite-derived Information for Improved Wildland Fire Behavior Forecasting
- Kyle Hilburn

Poster 503 (3:00-4:30, Hall E)
Universal Instrument Simulation Wrapper (UISW): A Lightweight and Flexible Observation Simulation Library in Support of Cal/Val, Data Assimilation and Digital Twin Projects
- Cheng Da (Milt Halem)

Poster 806 (3:00-4:30, Hall E)
Ka/W/G-band Simultaneous Radar Observations of Marine Clouds during the Eastern Pacific Cloud Aerosol Precipitation Experiment
- Juan Socuellamos (R. Rodriguez Monje)

Wednesday, January 31

Presentation 9.4 (9:15-9:30, Room 341)
A Combined Passive-Active, Multi-Sensor Approach to Earth's Planetary Boundary Layer (PBL) Thermodynamic Sounding
- Antonia Gambacorta

Presentation 10B.1 (10:45-11:00, Room 323)
Integrating WRF-SFIRE-CHEM in NASA Unified WRF (NUWRF)
- Jan Mandel (Milt Halem)

Presentation 10A.3 (11:15-11:30, Room 309)
Informing the Next Generation of Spaceborne Hyperspectral Microwave Sensors: Introducing the Hyperspectral Microwave Photonic Instrument (HyMPI) and demonstrating its Benefits for the NOAA Mission
- Antonia Gambacorta

Wednesday continued

Presentation J10C.4 (11:30-11:45, Room 316)
Future Lightning Instruments for Weather and Climate Monitoring from Low-Earth Orbit
- Patrick Gatlin

Town Hall (12:15-1:15, Room 310)
Meeting NASA's Earth System Observatory – Atmospheric Observing System
- Barry Lefer, Hal Maring, Jason Hair, Scott Braun, and Emily Berndt

Presentation 11A.4 (2:30-2:45, Room 345/346)
A Fuel Moisture Model for WRF-SFIRE from HRRR and RAWS Data by a Physics-Initialized Recurrent Neural Network
- Jan Mandel

Presentation 12B.6 (5:45-6:00, Room 321/322)
Intelligent Long Endurance Observing System
- Duncan (Meghan Saephan)

Thursday, February 1

Town Hall (12:15-1:15, Room 307)
NASA Earth Science: Planning for the Next-Generation Earth Observatories
- Karen St. Germain et al

Session 15B (1:45-3:00, Room 323)
Accelerating the Transition of NASA Science and Capabilities to Applications through the NASA SPoRT Center II
Cochairs: Amber Emory and Patrick Duran

Presentation 15B.5 (2:45-3:00, Room 316)
15B.5 NASA Earth System Digital Twins
- Jacqueline Le Moigne

Poster Session 004 (3:00-4:30, Hall E)
14th Conference on Transition of Research to Operations Session IV
Cochairs: Eric Fetzer, Amber Emory, and Stephen Mango

Poster 854 (3:00-4:30, Hall E)
Characterizing Ammonia and Methane Emissions from Northern Colorado Livestock
- Griffin Mead (Kevin Cossel)

Poster 895 (3:00-4:30, Hall E)
Decoding Climate Complexity: Novel Approaches to S2S Forecasting through Advanced AI Technology
- Pratik Shukla (Milt Halem)