

103rd AMS Annual Meeting / January 8-12, 2023

NASA Earth Science Technology Office (ESTO)

ESTO-Affiliated Presentations, Posters, and Events



Monday, January 9

Joint Session J1A (8:30 AM - 10:00 AM, 507)

Advances in Cubesats and Smallsats for Observations and Measurements of Earth Atmosphere Thermodynamic Structure and Processes, Winds, and Water Cycle Processes, and to Improve Climate Monitoring, Weather Forecasting, or Space Weather Prediction

Chairs: Martin Yapur and Robert Bauer

JointJ1A.1: TROPICS Moisture and Temperature Retrieval with NOAA MiRS - John Xun Yang

JointJ1A.2: High Resolution Infrared Sounder (HIRIS)
- Jeffery Puschell

JointJ1A.3: Atmospheric Boundary Layer Lidar PathfindEr (ABLE): Differential Absorption Lidar for Humidity Profiling, Aerosol/Cloud Profiling, and Methane Columns - Rory Barton-Grimley

JointJ1A.5: Fire Detection with Commercial IR Cameras on CubeSats and Stereo Weather and Smoke Plume Observations: Results from CUMULOS and the Rogue-alpha, beta Prototypes - Dee Pack

JointJ1A.6: Demeter: Next-Generation Observational Platform for Measuring the Earth's Radiation Budget Fundamental Climate Data Record - Anum Ashraf

Presentation 1B.6 (9:45 AM - 10:00 AM, 205)

Integrated Strategy for Regional Mapping of Speciated Particulate Matter as part of the Multi-Angle Imager for Aerosols (MAIA) Investigation - David Diner

Session 2A (10:45 AM - 12:00 PM, 507)

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: Part I

Chairs: Martin Yapur and Robert Bauer

2A.1: Recent Advances in Satellite Observations of Quantitative Precipitation and Convection Enabled By the Tempest-D Cubesat Mission As Well As By Tempest-H8 on the ISS - Steven C. Reising

2A.2: The BABAR-ERI Instrument: A Flexible and Cost-Effective Instrument for Imaging Broadband Radiation at High Spatial Resolution - Odele M. Coddington

2A.3: Long-term Solar Irradiance Measurements and Data Continuity: The Compact Total and Spectral Solar Irradiance Sensors (CTSIS) Mission - Erik C. Richard

2A.4: The Compact Total Irradiance Monitor: Ground Calibration and Initial on-Orbit Results - David Harber

2A.5: Emerging Technologies for Microwave Radiometer Calibration for Atmospheric Remote Sensing from Smallsats using Miniaturized Metamaterial Targets for Absolute Calibration
- Steven C. Reising

Presentation 2.4 (11:30 AM, 702)

Cross-Cutting Water Vapor and Methane Differential Absorption Lidar from Airborne and Space-Based Platforms - Amin Nehrir

Town Hall (12:15 PM - 1:15 PM, 507)

NASA's Earth Science Flight Program: Planning for the Next-Generation Earth Observatories

- Robert Bauer and Karen St. Germain

Presentation 3.2 (1:45 PM, 406)

Cubespark: A New Satellite-Based 3D Lightning Observing Concept

- Patrick Gatlin (S. Behnke)

Presentation 3A.3 (2:00 PM, 507)

Development and Airborne Demonstration of the Computational Reconfigurable Imaging Spectrometer (CRISP)

- Adam Milstein

Presentation 4.1 (3:45 PM, 705/707)

Potential Use of Spaceborne Differential Absorption Radar Measurements of Marine Surface Pressure to Improve Weather and Tropical Cyclone Forecasting - Nikki Prive

Presentation 4A.1 (3:45 PM, 507)

New Technologies to Enable Intelligent High-Resolution Sensing from Small Satellite Platforms: CREWSR and VIDEO - William J. Blackwell

Presentation 4A.2 (4:00 PM, 507)

The Research and Operational Value of the Midwave Infrared Sounding of Temperature and Humidity in a Constellation for Winds (MISTIC Winds) Mission Concept - Scot Rafkin

Presentation 4A.3 (4:15 PM, 507)

Advancing Our Understanding of the Earth's Planetary Boundary Layer from SPACE. Introducing the Hyperspectral Microwave Photonic Instrument (HYMPI) - Antonia Gambacorta

Presentation 4.4 (4:30 PM, 505)

A Data Driven AI/Machine Learning Approach to Conduct OSSEs

- Milton Halem

Tuesday, January 10

Presentation 7B.3 (2:00 PM, 205)

Regional Vs Local Sources of Municipal Air Pollution-Related Health Impacts - Daven Henze

Town Hall (6:00 PM - 7:15 PM, 710/712)

NASA Earth Science Division

Karen St. Germain, Jack Kaye, Charles Webb, Lawrence Friedl, Kevin Murphy, and Robert Bauer

Poster V73 (6:00 PM - 7:00 PM, Online)

AI Enhancement of the Planetary Boundary Layer in Retrievals from Microwave and Infrared Sounders - Adam Milstein

Wednesday, January 11

Town Hall (7:00 AM - 8:15 AM, 504)

NASA Planetary Boundary Layer Incubation Community

Cochairs: Amber Emory, Will McCarty, Barry Lefer, and Robert Bauer

Poster 724 (5:00 - 6:30 PM, Hall A)

Precipitation Data Analysis with CAPRI (a Cloud-based Analytical Framework for Precipitation Research)

- John Beck