

# 2018 American Meteorological Society Annual Meeting

NASA Earth Science Technology Office (ESTO)

ESTO-Funded and ESTO-Affiliated Presentations, Posters, and Events as part of the Eighth Conference on Transition of Research to Operations



## Monday, January 8

**Joint Session 5** (8:45-10:00, 615 AB Hilton)

**Advances in CubeSats and SmallSats to Improve Earth Science, Weather Forecasting, Space Weather Prediction, Hydrology Studies, or Climate Monitoring, Part I**

Cochairs: Margaret Caulfield and Robert Bauer

- **J5.1:** *MISTiC Winds, a Micro-Satellite Constellation Approach to High-Resolution Observations of the Atmosphere Using Infrared Sounding and 3D Winds Measurements* - K. R. Maschhoff
- **J5.2:** *High-Resolution Tomography of Upper Tropospheric and Lower Stratospheric Water Vapor with Spaceborne Active Microwave Limb Sounding* - Nathaniel Livesey
- **J5.3:** *RainCube, A Ka-band Precipitation Radar in a 6U CubeSat* - Shivani Joshi (Peral)
- **J5.4:** *Enabling Global Observations of Clouds and Precipitation at Fine Spatiotemporal Scales from 6U-Class SmallSat Constellations: Temporal Experiment for Storms and Tropical Systems Technology Demonstration (TEMPEST-D)* - Steven Reising
- **J5.5:** *Simulation of Temporal Observations by the TEMPEST CubeSat over a Hailstorm in the Dallas-Fort Worth Area* - Chandrasekar Radhakrishnan (Reising)

**Joint Session 10** (10:30-12:00, 615 AB Hilton)

**Advances in CubeSats and SmallSats to Improve Earth Science, Weather Forecasting, Space Weather Prediction, Hydrology Studies, or Climate Monitoring, Part II**

Cochairs: Stephen Mango and Eric Fetzer

- **J10.1:** *The CubeSat Infrared Atmospheric Sounder (CIRAS) Technology Demonstration in Support of a Future Earth Observing Nanosatellite-Infrared (EON-IR) Atmospheric Sounder* - Thomas Pagano
- **J10.2:** *Implementation of CubeSat Solar Irradiance Measurements: CSIM Solar Spectral Irradiance Continuity and On-Orbit Validation* - Erik Richard
- **J10.3:** *Applications of NASA TROPICS Data for Tropical Cyclone Analysis, Nowcasting, and Impact* - Bradley Zavodsky (Blackwell)
- **J10.4:** *What Can IceCube 883-GHz Radiometer Offer for Future Satellite Cloud Observations?* - Dong Wu
- **J10.5:** *Enabling Observations of Ice Cloud Particle Size and Humidity Profiles in the Upper Troposphere/Lower Stratosphere from the Tropospheric Water and Cloud ICE (TWICE) Millimeter and Sub-millimeter Wavelength Radiometer Instrument for 6U-Class Satellites* - Steven Reising

**Town Hall** (12:15-1:15, 615 AB Hilton)

**NASA's Earth Science Flight Program - Investments In And Planning For The Next-Generation Earth Observatories** - Eric Ianson

**Session 3A** (2:00-4:15, 615 AB Hilton)

**Advances in Satellite Observations for Earth Science and Observing Technologies, Part I**

Cochairs: Bjorn Lambrigtsen and Thomas Pagano

- **3A.1:** *Doppler Wind Lidar and the OAWL Instrument: Potential Contributions to the Future Global Winds Measurement Enterprise* - Sara Tucker

- **3A.2:** *DopplerScatt Instrument Concept for Simultaneous Measurements of Ocean Surface Vector Winds and Currents* - Dragana Perkovic-Martin

- **3A.3:** *Observing Ice Clouds with Microwave-IR Polarimetric Radiometry: SWIRP Development* - Dong Wu

- **3A.4:** *Compact Midwave Imaging System (CMIS) for Near-Real-Time Cloud Sensing* - Michael Kelly

- **3A.6:** *Enabling Technology Transforms a Prototype GNSS Interferometric Reflectometry (GNSS-IR) System to Global Operation* - Angelyn Moore (Kristine Larson)

- **3A.7:** *G-Band Differential Absorption Radar for Inside-Cloud Boundary Layer Humidity Retrieval* - Ken Cooper

## Tuesday, January 9

**Joint Session 23** (8:30-10:00, 9 AB)

**Observing System Concepts**

Chair: Carl Schueler

- **J23.1:** *RAVAN CubeSat Results: Technologies and Science Demonstrated on Orbit* - William H. Swartz

- **J23.3:** *The CubeSat Radiometer Radio Frequency Interference Technology Validation (CUBERTT) Mission* - Sidharth Misra

**Joint Session 29** (10:30-12:00, 9 AB)

**Enabling Technologies and Their Maturation**

Chair: John Pereira

- **J29.1:** *Assessments of CubeSat MicroMas-2 and CIRAS Impacts on NWP through Global OSSE* - Narges Shahroudi

**Town Hall** (12:15-1:15, 19 AB)

**NASA's Earth Science Division Town Hall** - Michael Freilich, Jack Kaye, Sandra Cauffman, Lawrence Friedl, Robert Bauer, Eric Ianson, and Patricia Jacobberger-Jellison

**Session 7** (1:30-3:45, 615 AB Hilton)

**Significant Role of Calibration/Validation for the Transition of Research-to-operations**

Cochairs: Changyong Cao and James G. Yoe

- **7.6:** *Preliminary Results from the VISAGE Project—Visualization for Integrated Satellite, Airborne, and Ground-Based Data Exploration* - Helen Conover

**Joint Session 32** (1:30-3:45, 9 AB)

**Earth Observing SmallSats: The New Normal**

Chair: Philip Ardanuy

- **J32.1:** *The Role of SmallSats and CubeSats for NASA Science (Invited Presentation, Core Science Keynote)* - Thomas Zurbuchen

- **J32.2:** *The NASA TROPICS CubeSat Constellation Observatory* - William Blackwell