



2013 AGU Fall Meeting

NASA Earth Science Technology Office (ESTO)

ESTO Funded and Affiliated Sessions, Presentations, Posters, and Events

Monday, December 9

Poster A13C-0201 (1:40 pm, Hall A-C, Moscone South)
Vertically-resolved retrievals of the atmospheric CO₂ concentration using multi-wavelength pulsed lidar measurements from the ASCENDS airborne campaigns
- Anand Ramanathan (James Abshire)

Poster A13C-0209 (1:40 pm, Hall A-C, Moscone South)
Pulsed Lidar Measurements of Atmospheric CO₂ Column Absorption in the ASCENDS 2011 & 2013 Airborne Campaigns
- James Abshire

Poster A13C-0210 (1:40 pm, Hall A-C, Moscone South)
Development of a 2-micron pulsed direct detection IPDA lidar for CO₂ measurement
- Jirong Yu

Poster A13C-0211 (1:40 pm, Hall A-C, Moscone South)
Atmospheric Backscatter Profiles at 765nm and 1572nm from Pulsed Lidar Measurements of CO₂ and O₂ Column Absorption from the 2013 ASCENDS Flight Campaign
- Graham Allan (James Abshire)

Poster A13C-0212 (1:40 pm, Hall A-C, Moscone South)
Technology advancement for the ASCENDS mission using the ASCENDS CarbonHawk Experiment Simulator (ACES)
- Michael Obland

Poster A13C-0215 (1:40 pm, Hall A-C, Moscone South)
Impact of a New Highly Sensitive HgCdTe Avalanche Photodiode Detector on Receiver Performance for the CO₂ Sounder Lidar for the ASCENDS Mission
- Xiaoli Sun

Tuesday, December 10

Poster Session IN21A (8:00 am, Hall A-C, MS)
Advanced Concepts in Satellite Data Acquisition I Posters
Conveners: Karen Moe, Charles Norton, and Michael Seablom

- **Poster IN21A-1378**
From Big Data to Small Transportable Products for Decision Support for Floods in Namibia
- Dan Mandl
- **Poster IN21A-1379**
The CEOS Global Observation Strategy for Disaster Risk Management: An Enterprise Architect's View
- Karen Moe
- **Poster IN21A-1384**
On-board Processing to Advance the PanFTS Imaging System for GEO-CAPE
- Stanley P. Sander
- **Poster IN21A-1386**
Multiscale Processes of Hurricane Sandy (2012) as Revealed by the CAMVis-MAP
- Bo-Wen Shen

Poster IN21B-1394 (8:00 am, Hall A-C, MS)
Improving Model Performance through Process-Based Diagnostics
- Thomas Clune

Poster C21D-0648 (8:00am, Hall A-C, MS)
The Glacier and Ice Surface Topography Interferometer: UAVSAR's Single-pass Ka-Band Interferometer
- Delwyn Moller

Poster C21D-0655 (8:00am, Hall A-C, MS)
Demonstration of centimeter-level precision, swath mapping, full-waveform laser altimetry from high altitude on the Global Hawk UAV for future application to cryospheric remote
- Bryan Blair

Session IN21D (8-10 am, Room 2020, Moscone West)
Big Data Analytic Systems: Computing and Collaborating Effectively in Distributed Systems I
Conveners: Martin Jukes, Michael Seablom, Frederic Laliberte, and Rahul Ramachandran

- **Presentation IN21D-03** (8:30 am)
A Demonstration of Big Data Technology for Data Intensive Earth Science
- Kwo-Sen Kuo

NASA Exhibit Talk (1:30 pm)
Evaluation of Big Data/Cloud databases for Regional Climate Modeling and Evaluation - Chris Mattmann

Poster NH23A-1524 (1:40 pm, Hall A-C, MS)
Sensitivity and uncertainty analysis of a physically-based landslide Model
- Soni Yatheendradas (Peters-Lidard)

Poster Session IN23A (1:40 pm, Hall A-C, MS)
Big Data Analytic Systems: Computing and Collaborating Effectively in Distributed Systems II - POSTERS
Conveners: Martin Jukes, Michael Seablom, Frederic Laliberte, and Rahul Ramachandran

- **Poster IN23A-1408**
Seamless online science workflow development and collaboration using IDL and the ENVI Services Engine
- Albert Harris (Rahul Ramachandran)
- **Poster IN23A-1418**
Parallelization of the Ensemble Empirical Model Decomposition (PEEMD) Method on Multi- and Many-core Processors
- Samson Cheung (Bo-Wen Shen)
- **Poster IN23A-1420**
Toward improving hurricane forecasts using the JPL Tropical Cyclone Information System (TCIS): A framework to address the issues of Big Data
- Brian Knosp (Hristova-Veleva)

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Poster IN23B-1432 (1:40 pm, Hall A-C, MS)

Collaborative workbench for cyberinfrastructure to accelerate science algorithm development

- Rahul Ramachandran

Session IN23E (1:40 – 3:40 pm, Room 2020, MW)

Advanced Concepts in Satellite Data Acquisition II

Conveners: Karen Moe, Charles Norton, and Michael Seabloom

- **Presentation IN23E-01** (1:40 pm)

Observing System Simulation Experiments to evaluate the potential impact of alternative technologies for space-based lidar winds on numerical weather prediction

- Robert M. Atlas

- **Presentation IN23E-03** (2:10 pm)

The NASA Land Information System (LIS) OSSE platform for terrestrial hydrology: Advanced OSSE capability

- Ken Harrison (Peters-Lidard)

- **Presentation IN23E-04** (2:25 pm)

Objective Evaluation of Sensor Web Modeling and Data System Architectures

- Michael Seabloom

- **Presentation IN23E-06** (2:55 pm)

Integrating Remote Sensing Data, Hybrid-Cloud Computing, and Advanced Rapid Imaging & Analysis

- Hook Hua

- **Presentation IN23E-07** (3:10 pm)

Next-Generation GPS Station for Hazards Mitigation

- Yehuda Bock

- **Presentation IN23E-08** (3:25 pm)

SoilSCAPE in-Situ Observations of Soil Moisture for SMAP Validation: Pushing the Envelopes of Spatial Coverage and Energy Efficiency in Sparse Wireless Sensor Networks

- Mahta Moghaddam

Presentation A23H-03 (2:25 pm, Room 3010, MW)

Retrieval of Vertical Structure of Atmospheric CO₂ Concentration from Airborne Lidar Measurements during the 2011 and 2013 ASCENDS Science Campaigns

- Jianping Mao (James Abshire)

Presentation A23H-07 (3:25 pm, Room 3010, MW)

Pulsed airborne lidar measurements of atmospheric optical depth using the Oxygen A-band at 765 nm

- Haris Riris

NASA Exhibit Talk (4:30 pm)

SoilSCAPE Wireless Sensor Network

- Mahta Moghaddam

Presentation A24E-03 (4:30 pm, Room 3004, MW)

Airborne Multiangle SpectroPolarimetric Imager (AirMSPI) observations during several 2013 NASA field campaigns

- David Diner

Presentation A24E-04 (4:45 pm, Room 3004, MW)

AirMSPI Observations, Retrieval Sensitivity, and GroundMSPI Comparisons

- Michael Garay

Wednesday, December 11

Presentation IN32A-02 (10:35 am, Room 2020, MW)

Expanding the Role of an Earth Science Data System: The GHRC Innovations Lab

- Helen Conover (Rahul Ramachandran)

NASA Exhibit Talk (12:00 pm)

Improving Climate Measurements with Accurate Earth Observing

- Greg Kopp

Poster IN33B-1549 (1:40 pm, Hall A-C, MS)

The JPL Tropical Cyclone Information System: Methods for Creating Near Real-Time Science Data Portals

- Brian Knosp (Hristova-Veleva)

NASA Exhibit Talk (5:00 pm)

Optical Autocovariance Wind Lidar (OAWL) for Space-based Wind and Aerosol Lidar Missions

- Sara Tucker

Thursday, December 12

Presentation H44E-03 (4:30 pm, Room 3020, MW)

Impact of Land Model Data Assimilation and Calibration on Coupled Land-Atmosphere Prediction

- Joe Santanello (Peters-Lidard)

Presentation GC44A-02 (4:30 pm, Room 104, MS)

Measuring Earth's radiation imbalance with RAVAN: A CubeSat mission to measure the driver of global climate change

- William H. Swartz

Presentation GC44A-03 (4:45 pm, Room 104, MS)

Solving climate uncertainty one tiny satellite at a time: Earth's Radiation Imbalance System

- Lars P. Dyrud

Friday, December 13

Presentation IN51C-03 (8:30 am, Room 2010, MW)

Leveraging On-premise and Public Cloud Computing to Enable Advanced Rapid Imaging & Analysis for Monitoring Hazards

- Hook Hua



For more information about ESTO and its technology investments, visit <http://esto.nasa.gov>