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 Seabloom

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

Poster C21D-0655 (8:00 am, 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 Juckes, Michael Seabloom, Frederic Laliberte, and Rahul Ramachandran

- Poster 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 Juckes, Michael Seabloom, 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)

Continued...
Tuesday, continued...

**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 Seablom

  - **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 Seablom

  - **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 Multispectral 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 Gao

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](http://esto.nasa.gov)