# AGENDA
## JOINT ICESAT-2 ATMOSPHERIC TUTORIAL
## *WITH CALIPSO, EARTHCARE, ADM-AEOLUS AND CATS*
May 31-June 1, 2017, Bechtel Collaboratory, University of Colorado Boulder

**Hosted by the NASA Ice, Cloud and land Elevation Satellite-2 (ICESat-2) Mission & UC-Boulder**

**Day 1**

| **Wednesday, May 31, 2017** | | |
|---|---|---|
| Topic | Speaker | Time |
| **Meet & Greet, Coffee** | | 7:30-8:00 AM |
| **Welcome, Background and Context** | | |
| **Opening Remarks & Logistics** | Ute Herzfeld, Department of Electrical, Computer and Energy Engineering, University of Colorado Boulder | 8:00-8:05AM |
| **Tutorial Welcome and Opening Remarks** | Terri Fiez, Vice Chancelor for Research, University of Colorado Boulder | 8:05-8:15 AM |
| **Tutorial Objectives, ICESat-2 Mission Design Overview** | Tom Neumann, ICESat-2 Deputy Project Scientist, NASA GSFC | 8:15-8:35 AM |
| **NASA Health and Air Quality Applied Sciences Team: Strategies, Opportunities and Interactions with Stakeholders** | Daven Henze, HAQAST Member, University of Colorado Boulder | 8:40-9:00 AM |
| **ICESat-2 Applications Overview & Perspective** | Sabrina Delgado Arias, Science Systems and Applications, Inc., NASA GSFC | 9:05-9:15 AM |
| **Morning Break** | | |
| **Session I: Synergies & Opportunities to Leverage Observations** | | |
| **The ICESat-2 Atmospheric Channel: Characteristics and Planned Products** | Stephen Palm, ICESat-2 Science Definition Team Member, NASA GSFC | 9:30-10:00 AM |
| **EarthCARE: Goals and Products** | [Remote] Gerd-Jan Zadelhoff, KNMI \| Dave Donovan, KNMI | 10:05-10:35 AM |
| **ADM Aeolus: Atmospheric Backscatter and Extinction Profile Products** | [Remote] Anne Grete Straume, ADM-Aeolus Mission Scientist, ESA | 10:40-11:10 AM |

| Wednesday, May 31, 2017 | | |
|---|---|---|
| Topic | Speaker | Time |
| **Panel Discussion I: Identify Synergies and Opportunities to Leverage ICESat-2 data with ADM Aeolus & EarthCARE** | | 11:10 AM-12:00 PM |
| **Lunch (On Your Own/Group Order)** | | |
| **An Overview of the CALIPSO Atmospheric Data Products** | Mark Vaughan, Algorithm Developer and Lidar Science Working Group Member, NASA LARC | 1:15-1:45 AM |
| **CATS: Instrument Overview and Products** | Patrick Selmer, CATS Operations Lead, NASA GSFC | 1:50-2:20 PM |
| **Panel Discussion II: Identify Synergies and Opportunities to Leverage ICESat-2 data with CALIPSO & CATS** | | 2:20-3:00 PM |
| **Afternoon Break** | | |
| **Session III: Transforming New Data into Actionable Information - Needs and Opportunities** | | |
| **A Web System Application Framework for use of Remote Sensing Observations in Air Quality Planning** | [Remote] Tom Moore, WRAP Air Quality Program Manager; WESTAR | 3:15-3:35 PM |
| **Cloud and Aerosol Measurement Priorities at NRL: Preparing for ICESat-2** | James Campbell, Naval Research Laboratory | 3:35-3:55 PM |
| **RASM-ESRL Coupled Sea Ice Forecasts: Comparison of modeled ice-ocean-atmospheric processes to observations** | Janet Intrieri, NOAA Earth System Research Laboratory | 3:55-4:15 PM |
| **Improving the National Air Quality Forecasting Capability (NAQFC) surface PM2.5 predictions via assimilation of MODIS AOD retrievals** | Rajesh Kumar, Research Applications Laboratory, NCAR UCAR | 4:15-4:35 PM |
| **Panel Discussion III: Insights into how to Best Combine Data Sets to Improve Forecasting Capabilities** | | 4:35-4:55 PM |
| **Closing Remarks – Day 1** | | 4:55-5:00 PM |
| **Social Dinner** | | 5:30 PM |

**Day 2**

| Thursday, June 1, 2017 | | |
|---|---|---|
| Topic | Speaker | Time |
| **Meet & Greet, Coffee** | | 8:00-8:20 AM |
| **Session IV: ICESat-2 Early Adopter Program** | | |
| **Recap of Day 1, Objectives for Day 2, & ICESat-2 Early Adopter Program** | Sabrina Delgado Arias, SSAI-NASA GSFC | 8:20-8:35 AM |
| **ICESat-2: first study on potentialities and limits** | [Remote] Lucia Mona, National Research Council of Italy, Institute of Methodologies for Environmental Analysis (CNR-IMAA) | 8:35-8:55 AM |
| **Detection of tenuous cloud layers, aerosols and blowing snow and applications in climate science and transportation hazard assessment** | Ute Herzfeld, Department of Electrical, Computer and Energy Engineering, University of Colorado Boulder | 9:00-9:20 AM |
| **Q&A, Early Adopter Program Opportunities** | | 9:20-9:45 AM |
| **Morning Break** | | |
| **Session IV: Coupling Data and Analysis** | | |
| **ICESat-2 cloud property retrieval: potential of apparent surface reflectance and solar background** | Yuekui Yang, ICESat-2 Science Definition Team Member, NASA GSFC | 10:00-10:20 AM |
| **Cloud and Aerosol Research Using Both CATS and CALIPSO: a comparison of similarities and differences in two lidar data sets** | Sharon Rodier, NASA LARC | 10:25-10:45 AM |
| **Using spaceborne lidar observations to constrain extratropical cloud feedbacks and climate sensitivity** | Jennifer Kay, Cooperative Institute for Research in Environmental Sciences, University of Colorado Boulder | 10:50-11:10 AM |
| **Improving Climate Projections: Importance of Synergistic Data Sets** | [Remote] Gregory Cesana, NASA Goddard Institute for Space Studies, Columbia University | 11:15-4:35 AM |
| **Panel Discussion IV: Opportunities and Limitations of Coupling and Assimilating Satellite Observations into Models/Analyses** | | 11:40 AM-12:00 PM |
| **Lunch (on your own/group order)** | | |

**Thursday, June 1, 2017**

| Topic | Speaker | Time |
|---|---|---|
| **ICESat-2 Data Access, Services, and User Support at the NASA NSIDC DAAC** | NSIDC DAAC: Amy Steiker, Product Support Specialist & Mahsa Moussavi, Science Liaison | 1:15-1:45 PM |
| **Breakout Discussions (led by panel chairs)**<br>**1. Air Quality Forecasting**<br>**2. Climate Prediction**<br>**3. Polar Change**<br>**4. Visibility & Transportation** | | 1:50-3:00 PM |
| **Afternoon Break – Breakout Leads Prepare Reporting (20 minutes)** | | |
| **Collaborative discussion/brainstorming:**<br>• **Breakout leads report back (15 minutes)**<br>• **Intersection of ICESat-2 Capabilities and User Needs**<br>• **Opportunities to incorporate ICESat-2 and other data sources**<br>• **Strategic collaborations** | | 3:20-4:50 PM |
| **Summary of Actions & Closing Remarks**<br>**Tutorial Adjourned** | | 4:50-5:00 PM |