

2nd ICESat-2 Applications Workshop
Visitor Center, NASA Goddard Space Flight Center
Greenbelt, MD 20771
March 10-11, 2015

Currently in its Design and Development phase (Phase C) and scheduled to launch in 2017, the Ice, Cloud, and land Elevation Satellite-2 (ICESat-2) Mission, offers one of the most spatially dense and finer precision instruments for global measurement of the earth's surface elevation. While some potential applications of the data have already been identified for the prediction of the changing ice environment, land management decisions, hazard monitoring and forecasting, as well as air quality, there still remains plenty of room for exploration of the decisions that ICESat-2 can potentially inform. A global, interdisciplinary perspective is needed with support from the broad user community to identify the current state of remote sensing, data gaps and needs in areas where altimetry can be applied: ice, hydrology, land, atmosphere, wind, waves, geodesy, and climate. This workshop aims to provide a clear and thorough overview of the functionality of the planned ICESat-2 data products and is designed to listen to the needs of end-users to inform Mission priorities and clarify the key applications for the Mission.

Goals

- Provide an overview of the ICESat-2 Mission and its planned data products
- Define critical needs shared by the different communities present
- Identify potential applications for the planned ICESat-2 data products and potential products of value to the community not currently planned by the Mission
- Foster the development of new collaborations

Expected Outcome

A better understanding of the broad user community needs for altimetry data and of the potential for ICESat-2 to address the challenges and current knowledge data gaps and needs across disciplines. Expanded Applications Traceability Matrix for ICESat-2 to provide an improved understanding of the range of policy questions that ICESat-2 can help inform. Increased collaboration opportunities with user groups to enable increased support for planned ICESat-2 data products and for potential products not planned for the Mission.

10 March, Tuesday		
8:30am	Registration and Coffee	
9:00am	<i>Woody Turner, NASA HQ</i> {5 min}	Workshop Welcome
9:05am	<i>Vanessa Escobar, ICESat-2 Mission Deputy Program Applications Lead</i> {15 min}	Welcome, Workshop Objectives, Charge to Workshop
9:20am	<i>Thorsten Markus, ICESat-2 Mission Project Scientist</i> {20 min}	ICESat-2 Mission Overview & Science Objectives
9:40am	<i>Sabrina Delgado Arias, ICESat-2 Deputy Applications Coordinator & POC</i> {15 min}	Mission Applications & Strategy for Workshops
9:55am	Morning Break	
10:10am	<i>Tom Neumann, ICESat-2 Mission Deputy Project Scientist</i> {25 min}	ICESat-2 Data Product Suite Overview
10:35am	<i>Mike Jasinski, ICESat-2 SDT Member and Applications Liaison to the Mission</i> {25 min}	Overview of MABEL and mATLAS simulated data
11:00am	<i>Steve Tanner & Doug Fowler, National Snow and Ice Data Center</i> {15 min}	ICESat-2 Data Management at NSIDC DAAC
11:15am	Q&A Panel with Mission & DAAC	
12:00pm	LUNCH 12:00-1:30pm Poster Session During Lunch Please use this opportunity to fill out survey, if you haven't already done so	
1:30pm	<i>Sabrina Delgado Arias, ICESat-2 Deputy Applications Coordinator & POC</i> {10 min}	ICESat-2 Early Adopter Program

1:40pm	Pam Posey, ICESat-2 Early Adopter, Naval Research Laboratory & Angela Ottoson, U.S. National/Naval Ice Center <i>{20 min}</i>	Use of ICESat-2 Data as a Validation Source for the U.S. Navy's Ice Forecasting Models End-User: National/Naval Ice Center; POC: LTJG David Keith, SDT Partner: Sinead L. Farrell, University of Maryland
2:00pm	Guy Schumann, Joint Institute for Regional Earth System Science & Engineering, University of California, Los Angeles <i>{20 min}</i>	Assessing the value of the ATL13 inland water level product for the Global Flood Partnership (GFP) End-User: GFP; POCs: Guy Schumann & Dr. Florian Pappenberger, ECMWF SDT Partner: Michael Jasinski, NASA GSFC
2:20pm	Charon Birkett, Earth System Science Interdisciplinary Center – University of Maryland <i>{20 min}</i>	The Application of Altimetry Data for the Operational Water Level Monitoring of Lakes and Reservoirs End-User: USDA/FAS, POC: Dr. Curt Reynolds SDT Partner: Michael Jasinski, NASA GSFC
2:40pm	Q & A Panel Early Adopters & End Users	
3:00pm	Afternoon Break	
3:15pm	<p>Breakout Session: what are known and potential ICESat-2 applications? Project Team and SDT members will be co-chairs for two concurrent breakout sessions. The breakout sessions will be organized by the following potential themes: Vegetation, Arctic & Sub-Arctic Hydrology, Open Ocean, Sea Ice, Glaciology, and Atmosphere.</p> <p>Main topic:</p> <ol style="list-style-type: none"> 1. Planned ICESat-2 data products by theme (i.e. vegetation, hydrology, open ocean, etc.) 2. Existing community data, tools, and modeling resources 3. Data and knowledge limitations/gaps for addressing key policy challenges and uncertainties 4. Three/four use cases for current critical needs 	
	[Potential Theme] applications	SDT Lead for Breakout
	[Vegetation] land management: land-use, agriculture, forestry, tourism, habitat biodiversity, construction	Lead: Tom Neumann
	[Hydrology] operational planning and forecasting; Mining, oil and gas pipelines; Navigation, hydro power; Fisheries, tourism; post-fire recovery	Lead: Mike Jasinski
	[Open Ocean] sea level monitoring; coastal inundation and restoration; ship traffic; fisheries; marine safety; oil spill forecasting; marine faunal surveys; commercial navigation; military defense	Lead: Thorsten Markus
	[Sea Ice] Maritime navigation; oil and gas; shipping; fishing; search and rescue; telemedicine; tourism	Lead: Thorsten Markus
	[Glaciology] volcanic hazard assessment; water resource management; tourism industry; insurance; agriculture; regional planning	Lead: Tom Neumann
	[Atmosphere] air quality forecasts; public health; aviation safety; ash fall: agriculture (livestock), buildings, waste water systems, water supply	Lead: Yuekui Yang
4:30pm	Vanessa Escobar, Thorsten Markus	Closing Remarks & Announcements
5:00pm	Day 1 Adjourned Poster Session until 5:00pm, Social Dinner to follow Poster Session	
11 March, Wednesday		
8:30am	Registration and Coffee	

9:00am	<i>Vanessa Escobar, ICESat-2 Mission Deputy Program Applications Lead</i> {15 min}	Recap of Day 1, Objectives for Day 2, Charge to Breakout group summaries
9:15am	<i>5 minute informal (no presentation) summaries from each breakout group lead & discussion by entire group</i>	
10:15am	Morning Break	
10:30am	<i>Jeanne M. Sauber Rosenberg, NASA</i> {20 min}	Illuminating Earthquake Hazard
10:50am	<i>John Brock, USGS</i> {20 min}	3D Elevation Program (3DEP) and Applications in the Coastal Zone
11:10am	<i>Rafael Ameller, StormCenter Communications, Inc</i> {20 min}	Improving Geospatial Intelligence Through Collaboration
11:30am	Q & A with Guest Speakers	
12:00pm	LUNCH 12:00-1:30pm	
1:30pm	Panel <i>Open discussion – Identify potential collaborations and opportunities</i> 1. <i>What are potential Cal/Val opportunities-collaboration?</i> 2. <i>What studies could we do to determine if the sensor will have the appropriate accuracies and information needed for certain applications?</i> 3. <i>How can ICESat-2 best integrate its user community?</i>	
2:00pm	<i>Vanessa Escobar</i> {15 min}	Closing Remarks, Announcements & ICESat-2 Community Questionnaire Discussion
2:15pm	ICESat-2 Workshop Adjourned <i>Thank you for your Participation!</i>	