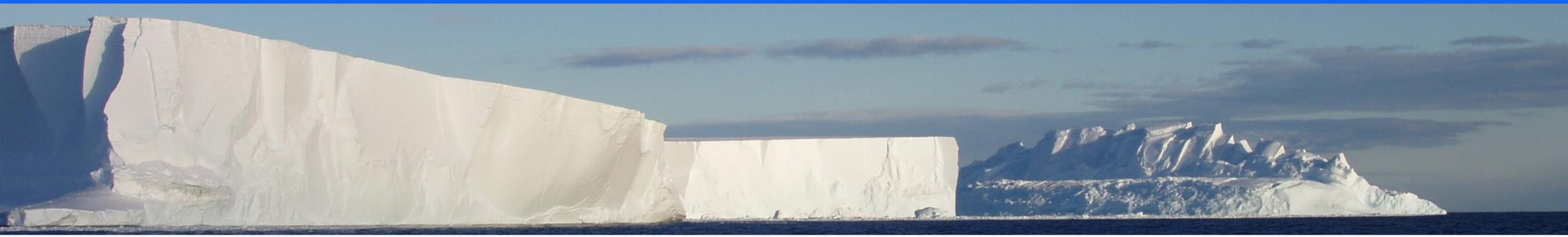
NASA ICESat-2 Satellite Bathymetry Workshop

Dr. Aimee Neeley
ICESat-2 Applications Team
Wilmington Convention Center



Workshop Goals

- Provide an overview of the ICESat-2 Mission.
- Provide an overview satellite-derived bathymetric methods and first principles.
- Provide demonstrations of different bathymetric tools and methods.
- Introduce ATL24, a new bathymetry data product from ICESat-2.
- Organize breakout session with pre-defined topics.

Meet the Applications Team

Applications Team: *Aimee Neeley, Molly Brown, Tom Neumann, and Helen Fricker*

Applications Lead and Scientist: *Aimee Neeley and Molly Brown*

-Implementation of the Applied Users program and application events

-Communication, outreach for ICESat-2 science product uses.

-Broadening of the user community and accelerating familiarity and use of mission products.

Science Team Lead: *Helen Fricker*

-Liaison between Applications and the Science Team; Provide the most recent information on mission status and products

Mission Leadership: *Tom Neumann, Nathan Kurtz, and Denis Felikson*

-Provide guidance on Mission Science Applications capabilities

NASA Headquarters Program Applications Lead: *Woody Turner*

-*O*versee mission applications at NASA HQ and provides feedback/guidance on program applications

Strategy for a successful workshop

- Presentations are intended to be interactive discussions - we want to hear from you. Ask questions and provide feedback!
  - All workshop feedback and comments are reported to the mission and responses will be delivered in the workshop report.
- Consider the Applied User program as a way to leverage research and collaborations.
- Initiate new collaborations by connecting with workshop attendees and the Science Team.
- Suggest other communities and applications that will benefit from the ICESat-2 bathymetry product.

MEETING *Agenda*

DATE:
17 MARCH 2025

TIME:
9.00 AM - 5:00 PM

PLACE:
WILMINGTON CONVENTION CENTER, WILMINGTON, NC

Agenda	Topic	Time
WELCOME, INTRODUCTIONS, AND AGENDA	• Opening remarks • Brief introductions of each attendee?	9:00 - 9:10am Aimee Neeley
PRINCIPLES OF SAT-BATHY	• Overview of Earth Observation instruments • Basic principles of satellite-derived bathymetry • Approaches and algorithms • Capabilities and limitations	9:10 - 10:00am Ross Smith
SATELLITE-BATHYMETRY METHODS AND TOOLS	• SatBathy (Gretchen Imahori, NOAA) • Physics-based SDB (Minsu Kim, USGS) • EOMAP (Edward Albada)	10:00 - 10:20am 10:20 - 10:40am 10:40 - 11:00am
	MID-MORNING BREAK	11:00 - 11:10am
SATELLITE-BATHYMETRY METHODS AND TOOLS	• SaTSeaD (Monica Lovejoy, USGS) • Trident Tools (Ross Smith, TCarta) • ATL13 (Michael Jasinski, NASA)	11:10 - 11:30am 11:30 - 11:50am 11:50 - 12:10pm
	LUNCH BREAK	12:10 - 1:30pm
ICESAT-2 DATA PRODUCT (ATL24)	• Overview of ATL24 • Applications • Uncertainties	1:30 - 1:50pm Christopher Parrish, OSU
SLIDERULE DEMO	Overview and functionality of SlideRule web service	1:50 - 2:10pm J.P. Swinski, NASA
BREAKOUT SESSIONS		2:10 - 5:00pm

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www.icesat-2.gsfc.nasa.gov

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BREAKOUT 1	Best practices of ICESat-2 and imagery for SDB modeling	2:10pm - 3:00pm
BREAKOUT 1 - REPORT OUT	Summary of discussion presented by the rapporteur from each group	3:00pm - 3:20pm
	MID-AFTERNOON BREAK	3:20pm - 3:30pm
BREAKOUT 2	Utilizing ATL24 and other EO sensors for improving SDB with ICESat-2	3:30pm - 4:15pm
BREAKOUT 2 - REPORT OUT	Summary of discussion presented by the rapporteur from each group	4:15pm - 4:35pm
Q&A AND OPEN DISCUSSION	Questions and feedback Open discussion on any concerns or suggestions	4:35pm - 5:00pm
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Resources:

- icesat-2.gsfc.nasa.gov
- cryointhecloud.com
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- slideruleearth.io
- icepyx.readthedocs.io/en/latest/index.html
- openaltimetry.earthdatacloud.nasa.gov/data/
- youtube.com/c/NASAEarthdata
- https://sealevel.nasa.gov/data_tools/17/