



TEACHERS AND RESEARCHERS  
EXPLORING AND COLLABORATING

# Welcome to *PolarConnect*

with Mark Buesing and the NASA  
IceBridge 2013 PolarTREC Expedition

**Tuesday 13 August 2013**

19:00 a.m. AKDT

(10:00 am PDT, 11:00 am MDT, 12:00 pm CDT, 1:00 pm EDT)

Slides will be shown here

Exit the presentation

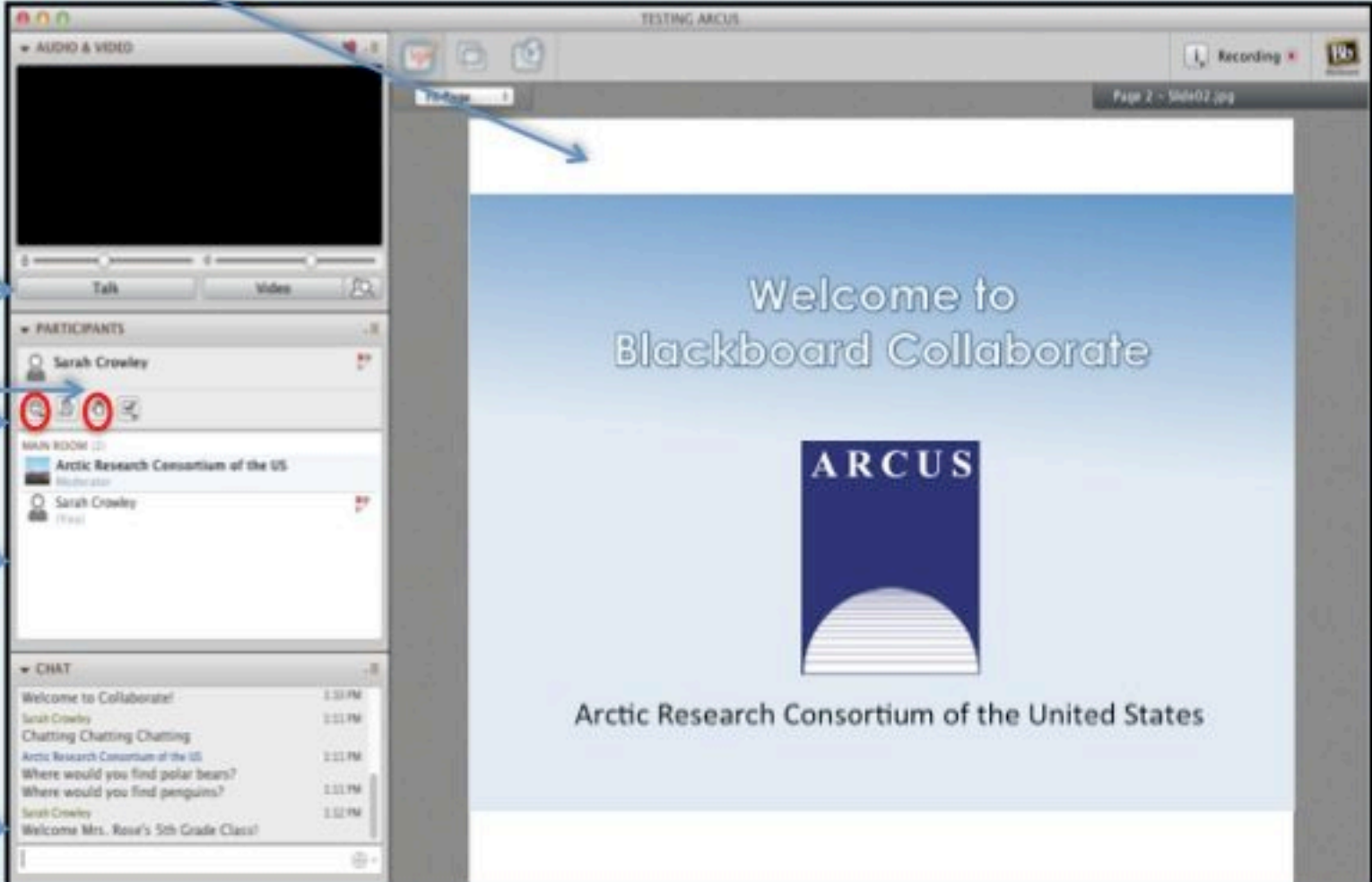
**Click** to Talk,  
**Unclick** to finish talking

Raise your hand to ask a question

Share with emoticons

List of all participants

Chat with one person or the entire group



The screenshot shows the Blackboard Collaborate interface. The main window displays a presentation slide titled "Welcome to Blackboard Collaborate" with the ARCUS logo and the text "Arctic Research Consortium of the United States". The left sidebar contains several panels: "AUDIO & VIDEO" with a "Talk" button and a "Video" button; "PARTICIPANTS" with a list of participants including Sarah Crowley and Arctic Research Consortium of the US; "MAIN ROOM" with a list of participants; and "CHAT" with a chat history showing messages like "Welcome to Collaborate!" and "Where would you find polar bears?". Arrows point from the text labels on the left to the corresponding elements in the interface.

## Please Note:

- Participants using the telephone can mute/unmute by **pressing \*6** on the phone.
- Today's event will be recorded and archived.

# Participant Introductions

**Please type in the chat box:**

- ✓ Name
- ✓ Affiliation (School, Institution, Etc.)
- ✓ The number of students and adults participating with you in the same location



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# What is PolarTREC?

PolarTREC is a professional development experience in which K-12 teachers are paired with researchers for 2-6 week research experiences in the polar regions.

From 2010-2013, nearly 50 teachers from around the United States will join scientists in the Arctic and Antarctica to learn about science, the polar regions, and to share what they have learned with their students and communities.



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# Questions

## During the Presentation:

- Type your question in the text chat box

## At the End of the Presentation:

- Raise your hand with the “hand button”.
- PolarTREC staff will call on you.
- Speak loud and clear and directly into the phone to ask your question.

**Click on the Talk button to speak.**

**Unclick when you are done.**



# **PolarTREC and NASA's Operation IceBridge**



**Mark Buesing**







facebook

Search for people, places and things

Mark Buesing Home



### NASA Operation IceBridge

539 likes · 161 talking about this · 5 were here

Liked Message

Government Organization  
An airborne mission to study Earth's polar ice.



539



About - Suggest an Edit

Photos

Likes

Map

Events

Highlights

Post Photo / Video

Friends

Chat (Off)



- NEWS**  
News, features & press releases
- MISSIONS**  
Current, future, past missions & launch dates
- MULTIMEDIA**  
Images, videos, NASA TV & more
- CONNECT**  
Social media channels & NASA apps
- ABOUT NASA**  
Leadership, organization, budget, careers & more

 Search

NASA Home > Missions > IceBridge Send Share

### Missions

- Missions Highlights
- Current Missions
  - Current Missions
  - IceBridge**
    - Current Campaign
    - Past Campaigns
    - Mission Overview
    - Science
    - Team
    - News & Media Resources
    - Multimedia
    - Education
    - Aircraft & Instruments
- Past Missions
- Future Missions
- Launch Schedule
- Mission Calendar

### IceBridge Science

Find IceBridge data and publications at our science website  
[Visit site](#)



### Latest IceBridge Campaign News

05.01.13  
Expanding IceBridge's Reach



### Current IceBridge Campaign

Arctic 2013  
March 18 - May 2

### Latest Videos

Flying Low over Southeast Greenland



[View This Video](#)











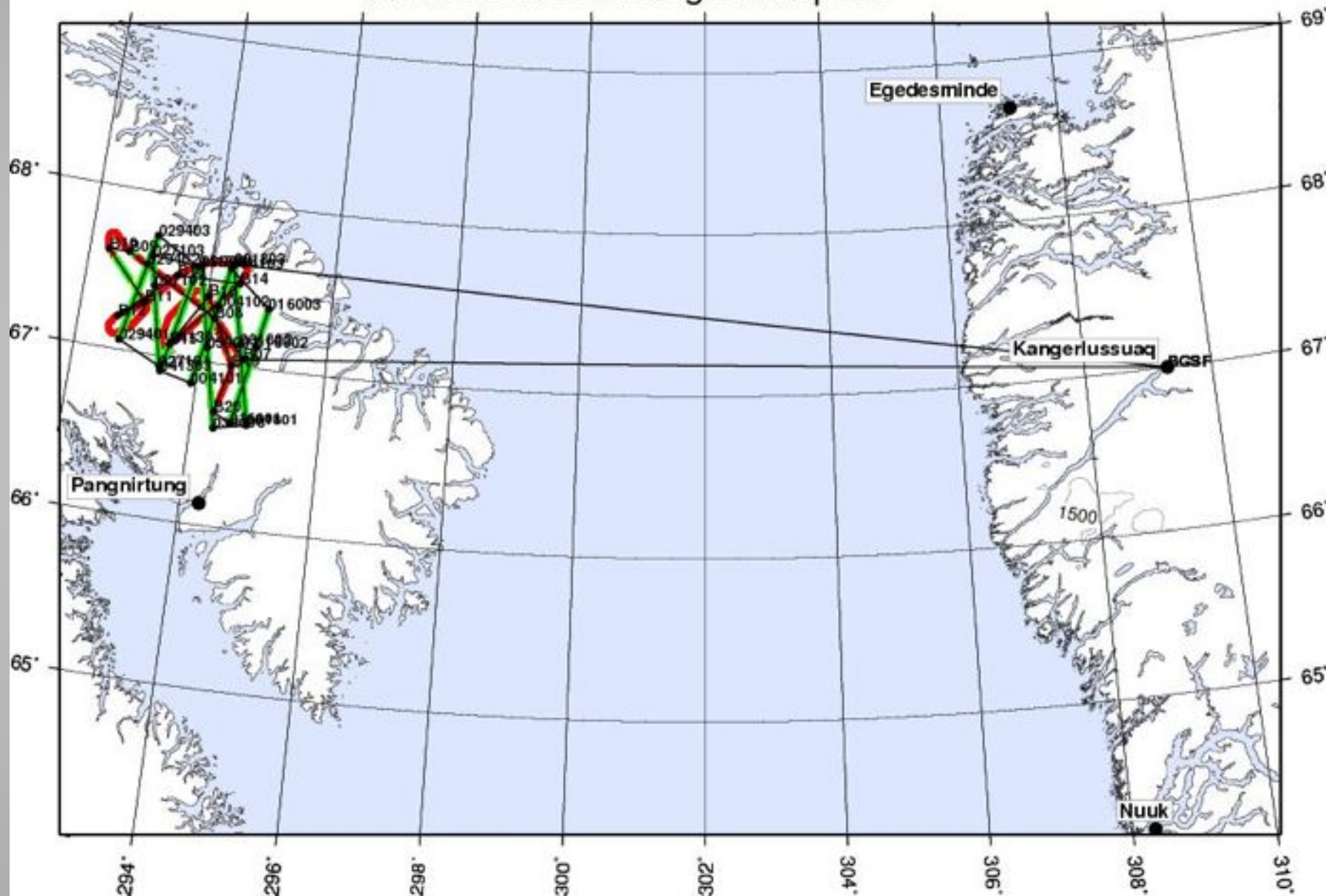






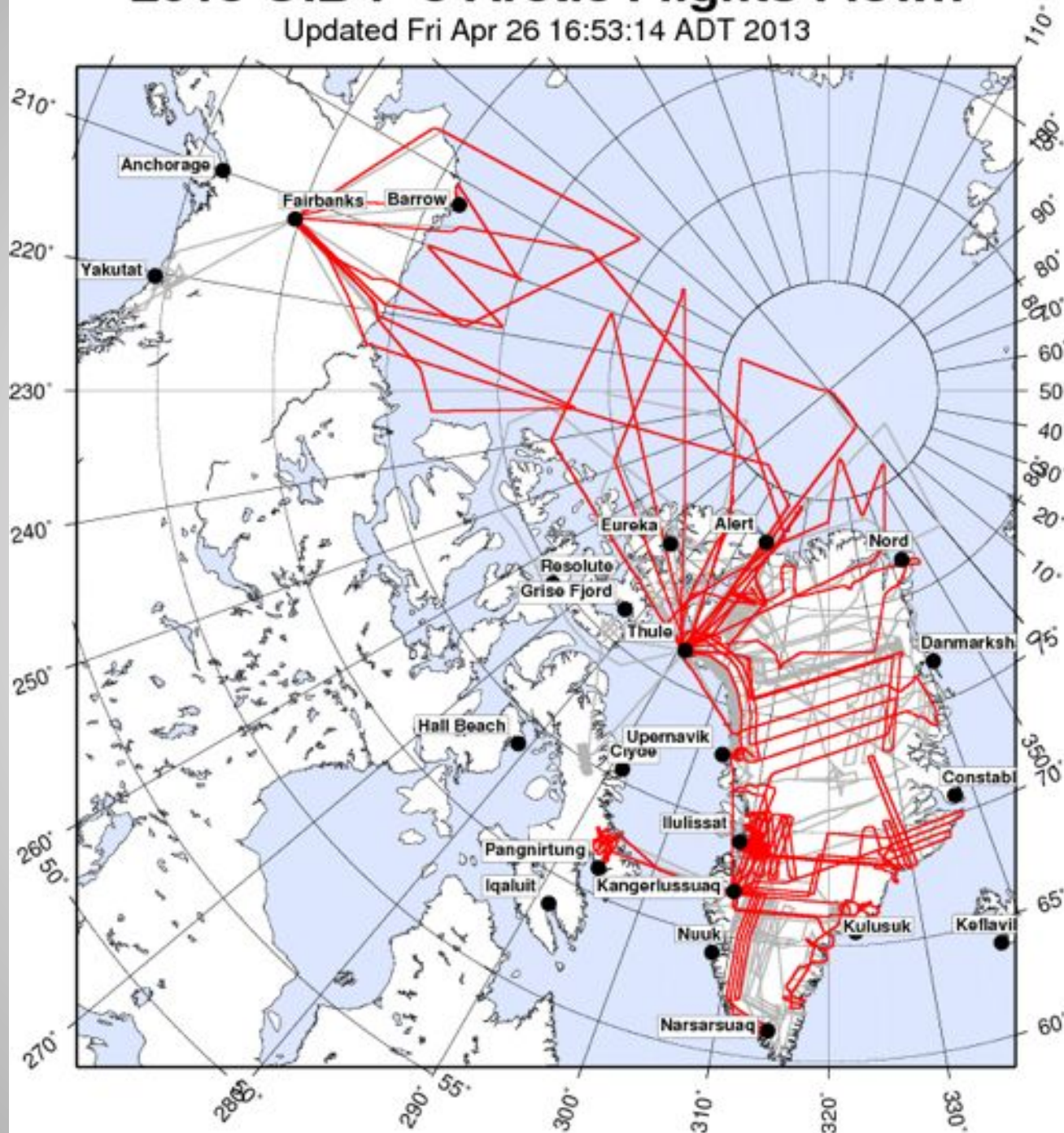
# Baffin 02

6.2 hrs at 250 knots groundspeed



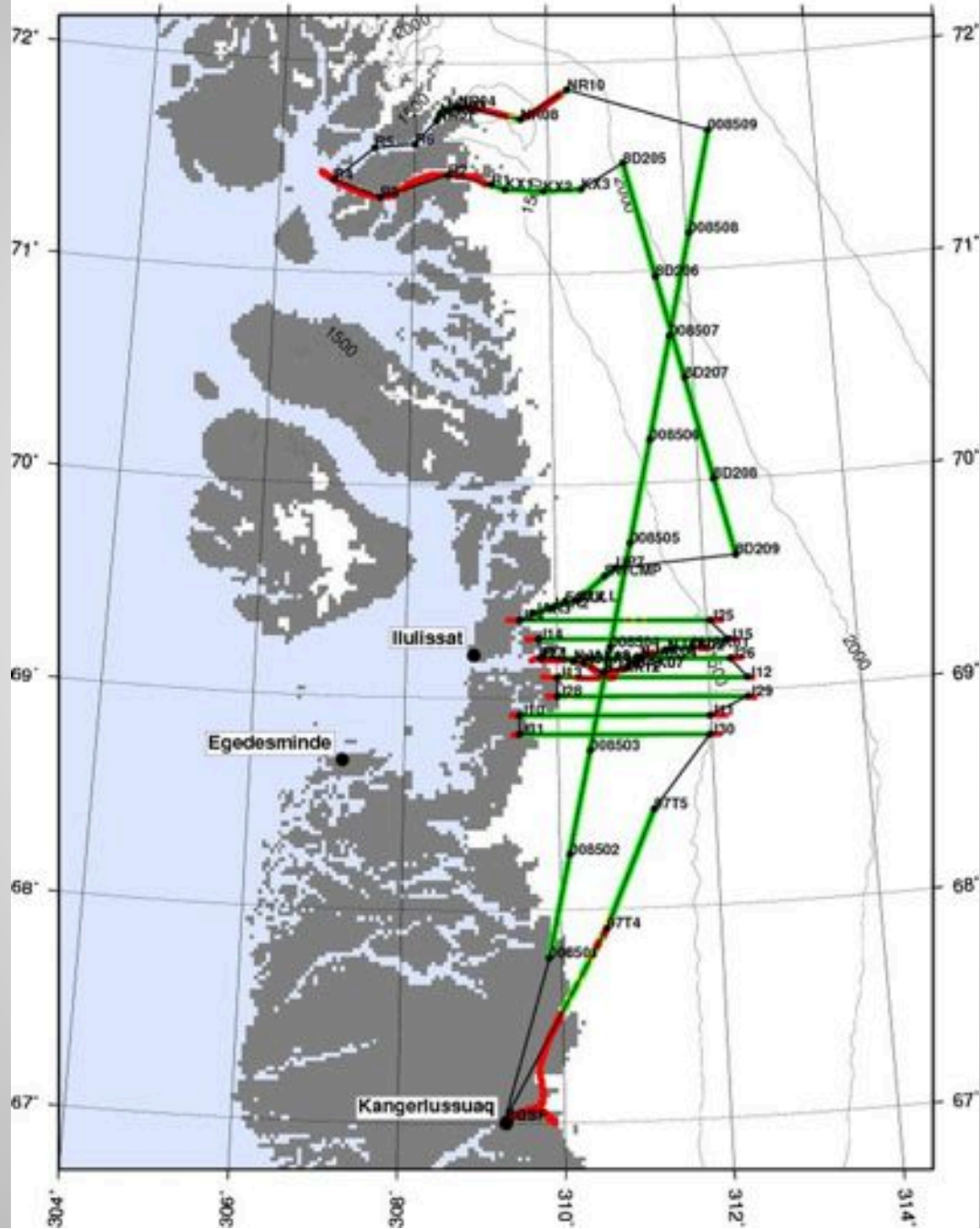
# 2013 OIB P-3 Arctic Flights Flown

Updated Fri Apr 26 16:53:14 ADT 2013



# Jakobshavn 02

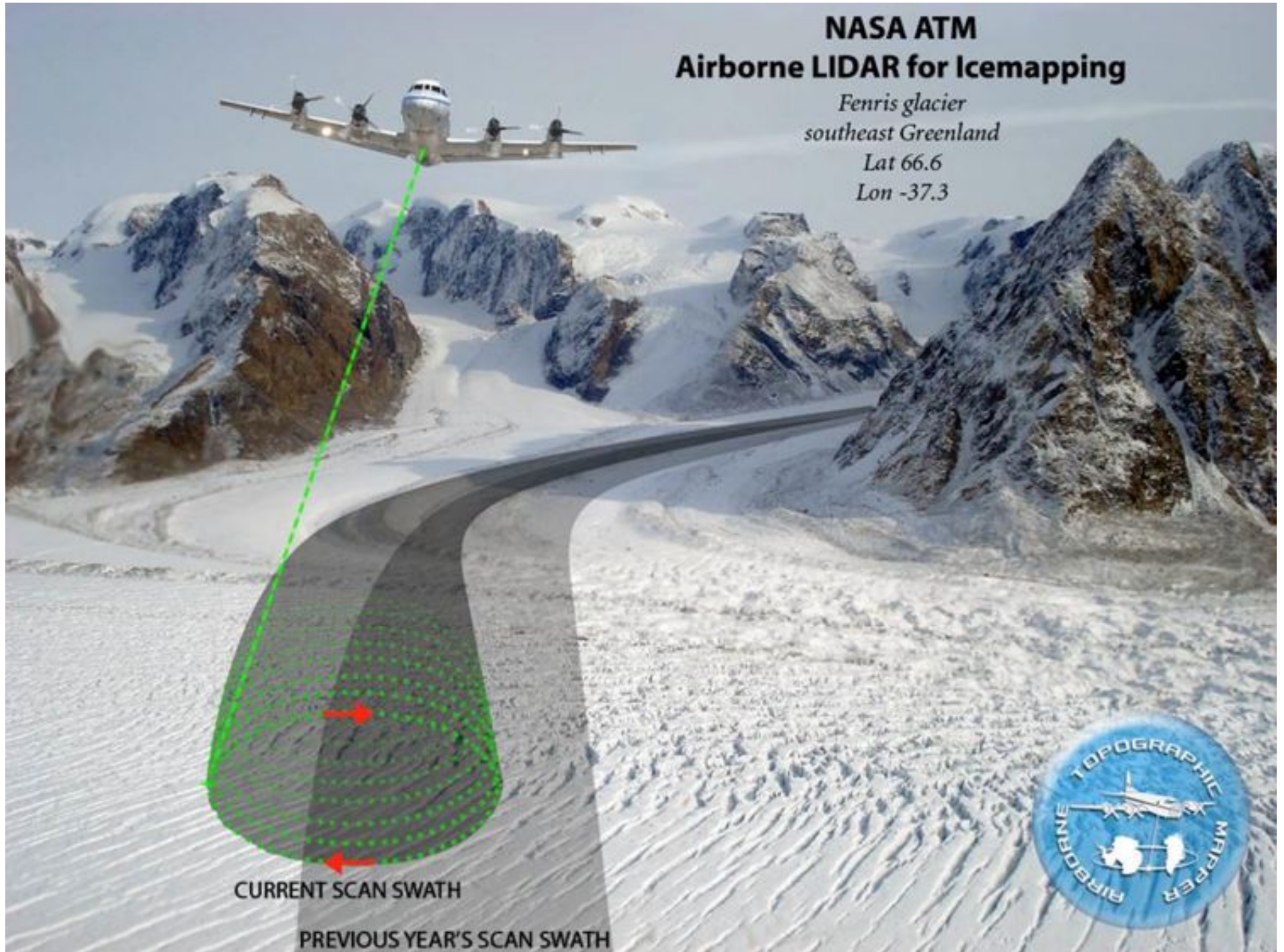
6.3 hrs at 250 knots groundspeed





# NASA ATM Airborne LIDAR for Icemapping

*Fenris glacier  
southeast Greenland  
Lat 66.6  
Lon -37.3*

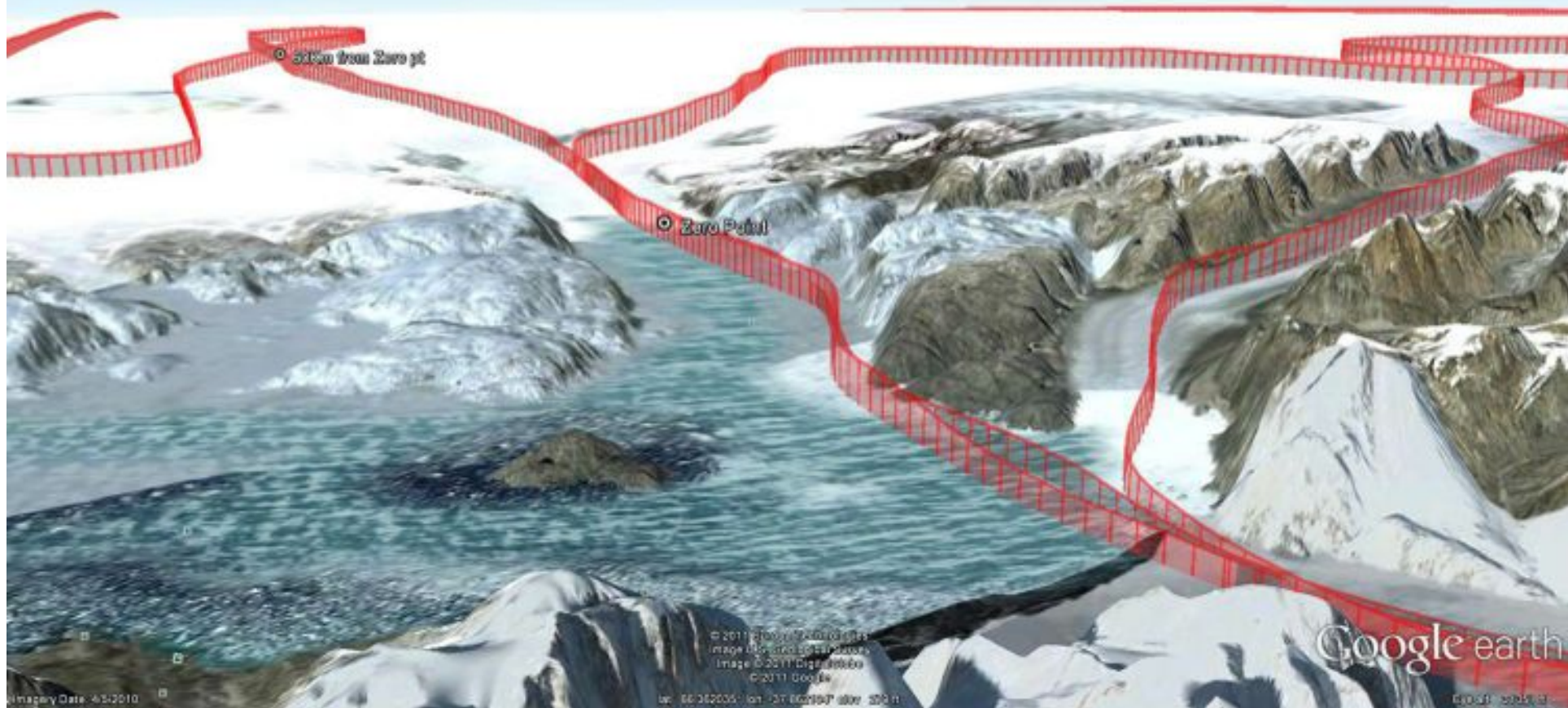


CURRENT SCAN SWATH

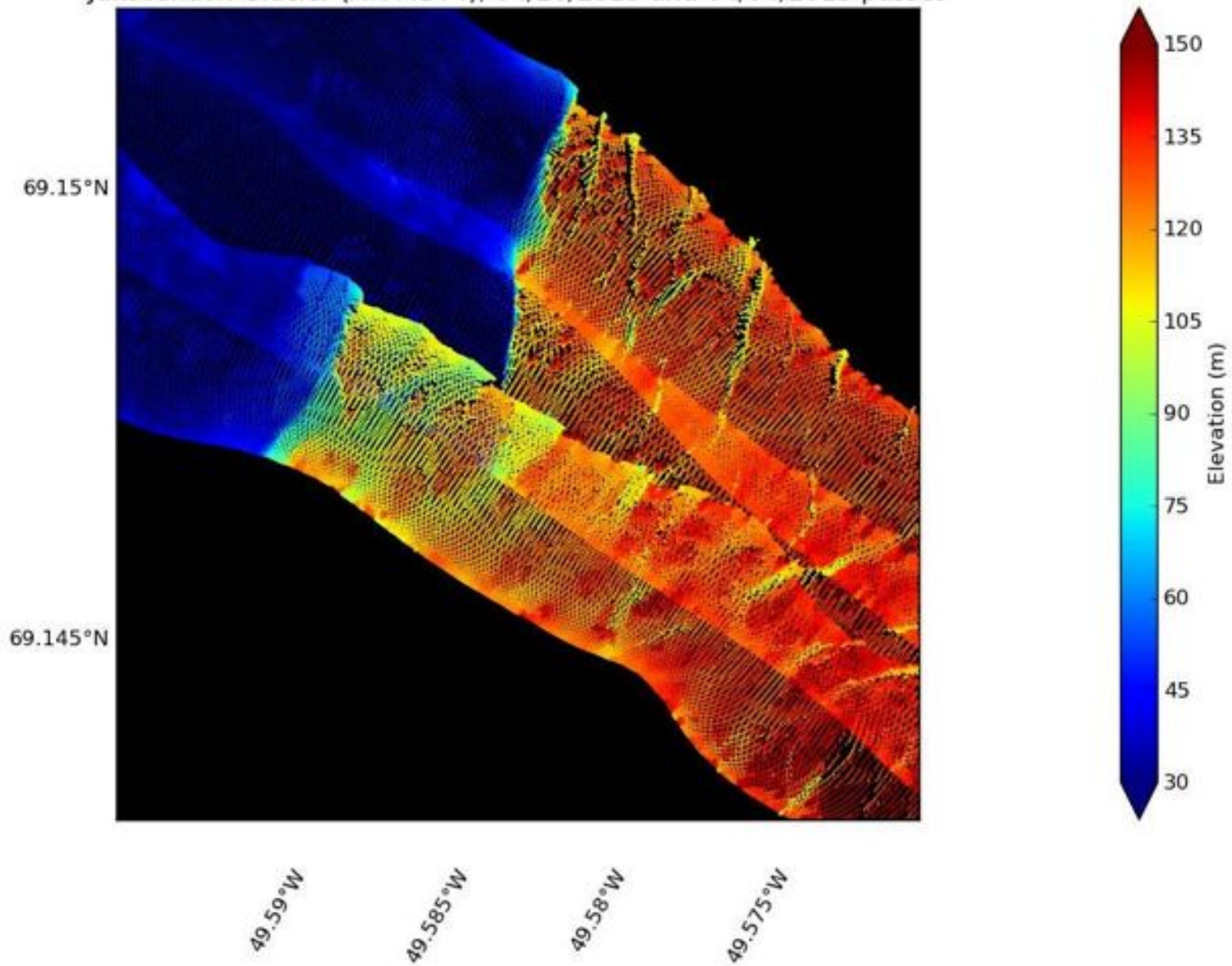
PREVIOUS YEAR'S SCAN SWATH



# ATM flightline 04-19-2011 Helheim Glacier

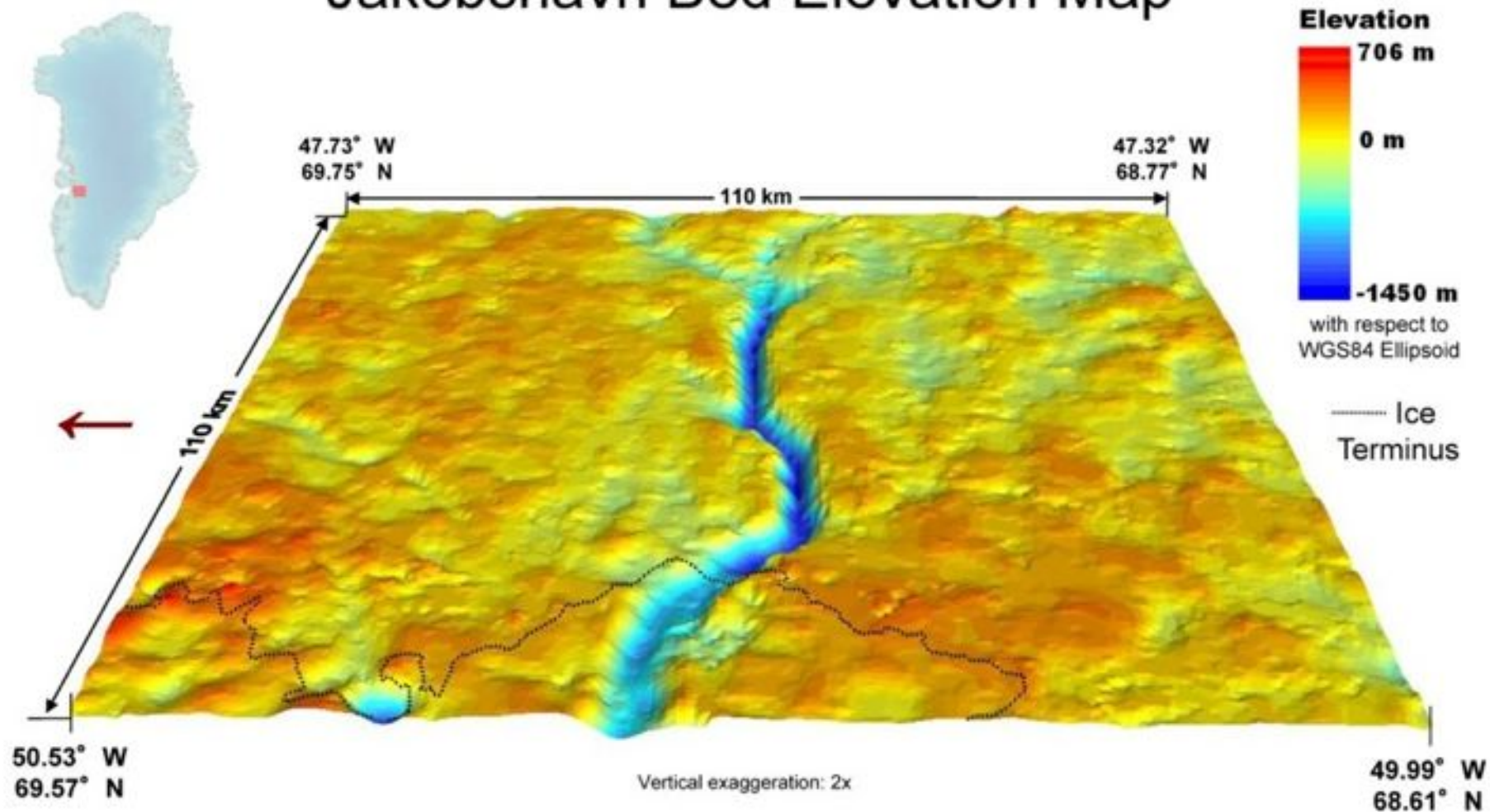


Jakobshavn Glacier (ATM4BT4), 04/10/2013 and 04/04/2013 passes





# Jakobshavn Bed Elevation Map



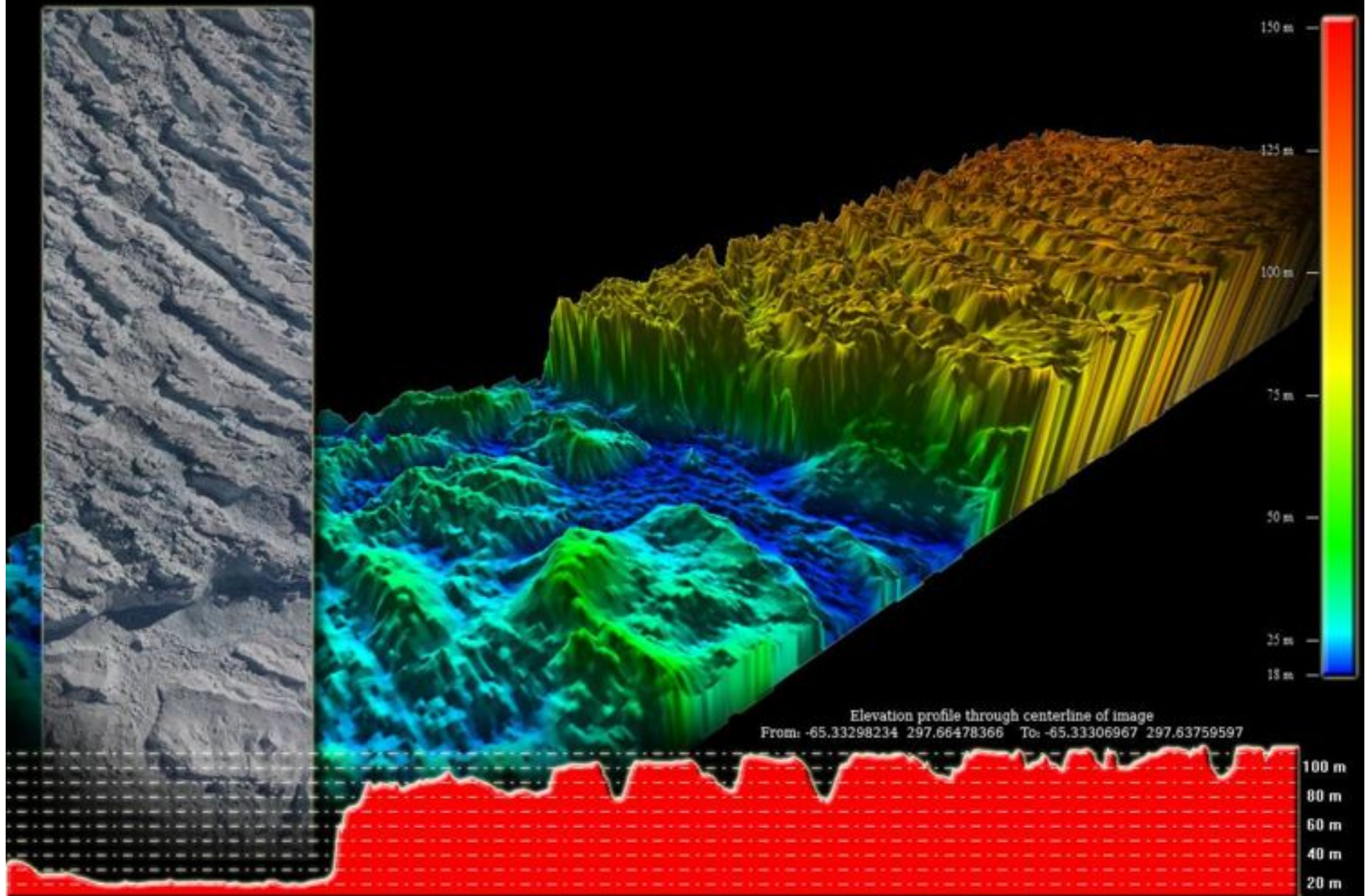
## Data Sources:

Ice thickness: KU Polar Radar, 1997-1999, 2001-2003, 2005-2009  
Ice surface elevation: W. Krabill, NASA  
Bare rock elevation: B. Csatho, U. Buffalo, 2006 ASTER DEM  
Open fjord depth: D. Holland, NYU

Plummer et al., 2011

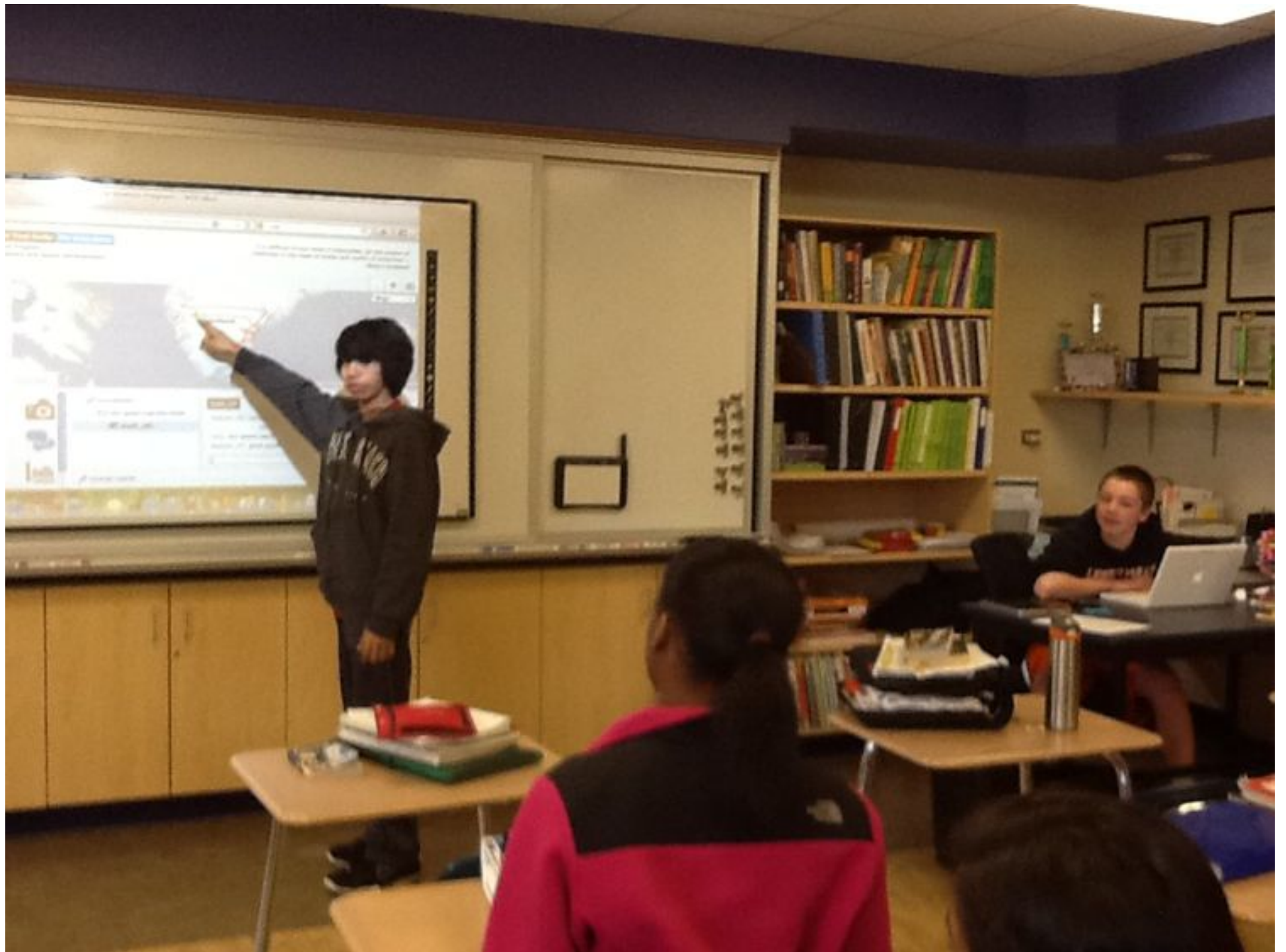
# Crane Glacier, Antarctica, 10-31-2009

Image data From NASA ATM T3 LIDAR  
Operation Ice Bridge - NASA DC8 - N817NA - Fall 2009





Why are science,  
technology,  
engineering, and  
math vital  
to *all* students.







Hello from Greenland!



Invite people

Chat  
Mark, Becky

Screenshare

Capture

Google Effects

The Ping-Pong H...

Scoot & Doodle

... View more apps

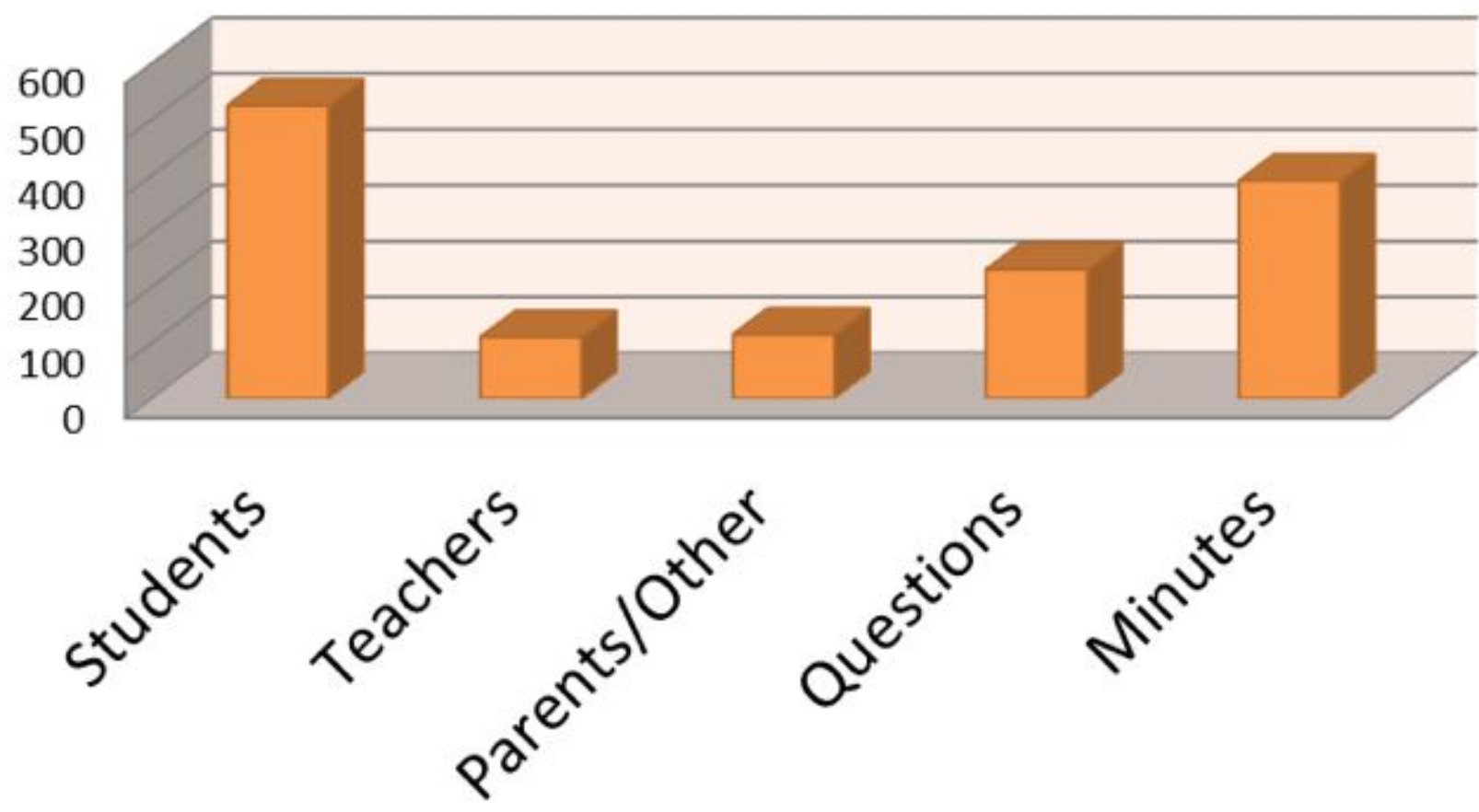
Help



Report an issue



# Outreach





## Mark Buesing

### About

**Expeditions:** Airborne Survey of Polar Ice 2013

**Occupation:** Teacher

**Organization:** Libertyville High School



Mark Buesing confesses that he is not a teacher. At least that's not what he started out as. Mr. Buesing graduated with honors in Electrical Engineering from the University of Illinois - Urbana. He worked at both Hughes Aircraft in the Missile Development Division and Motorola in the Cellular Subscriber Division.

In college Mr. Buesing started bicycle racing. As he began receiving wider recognition as a bicycle racer, he accepted an offer to race full time and left Motorola on good terms. While racing, he was selected to train at the Olympic Training Center, was twice the Illinois Rider of the Year, and rode in the 1992 Olympic Trials.

During an off-season from cycling, a physics teacher at a local high school quit. A friend called and asked Mr. Buesing if he could fill in until the school could find a "real" teacher. Mr. Buesing loved engineering, but after a few days in the classroom, felt a calling to be a teacher; he had accidentally discovered what he was meant to do. After retiring from cycling Mr. Buesing completed a Master's in Education and embarked on a teaching career.

"Mr. Mark," as his students call him, teaches Physics and AP Physics at Libertyville High School. He is the head cross country coach and coaches the school's academic decathlon team. He lives in Bristol, WI with his wife, two children, and a dog.

### Mark Buesing's Content

Journals

Resources

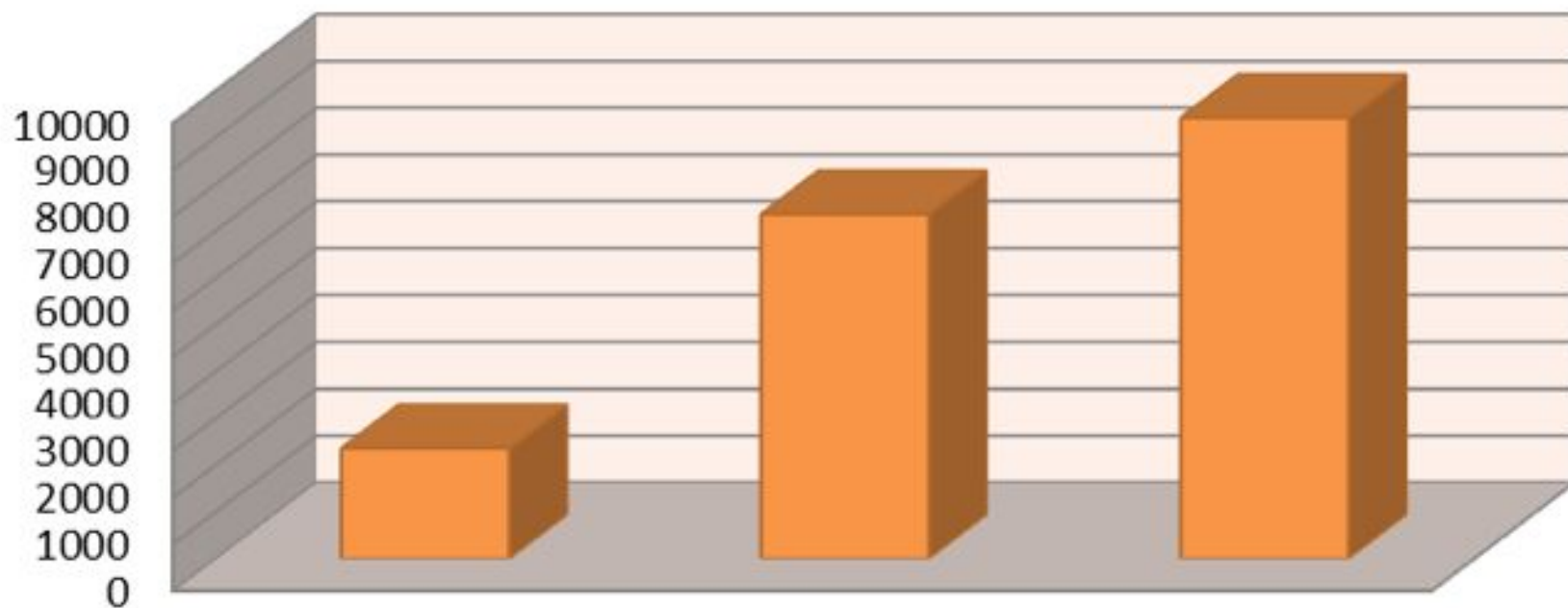
Forum Posts

Forum Replies

Title		Posted
April 21, 2013 PolarTREC and NASA's Operation IceBridge By The Numbers	<a href="#">Read Full Journal</a>	21 April 2013
April 20, 2013 Home Sweet Home	<a href="#">Read Full Journal</a>	20 April 2013
April 19, 2013 Project Scientist Michael Studinger	<a href="#">Read Full Journal</a>	19 April 2013



# Analytics

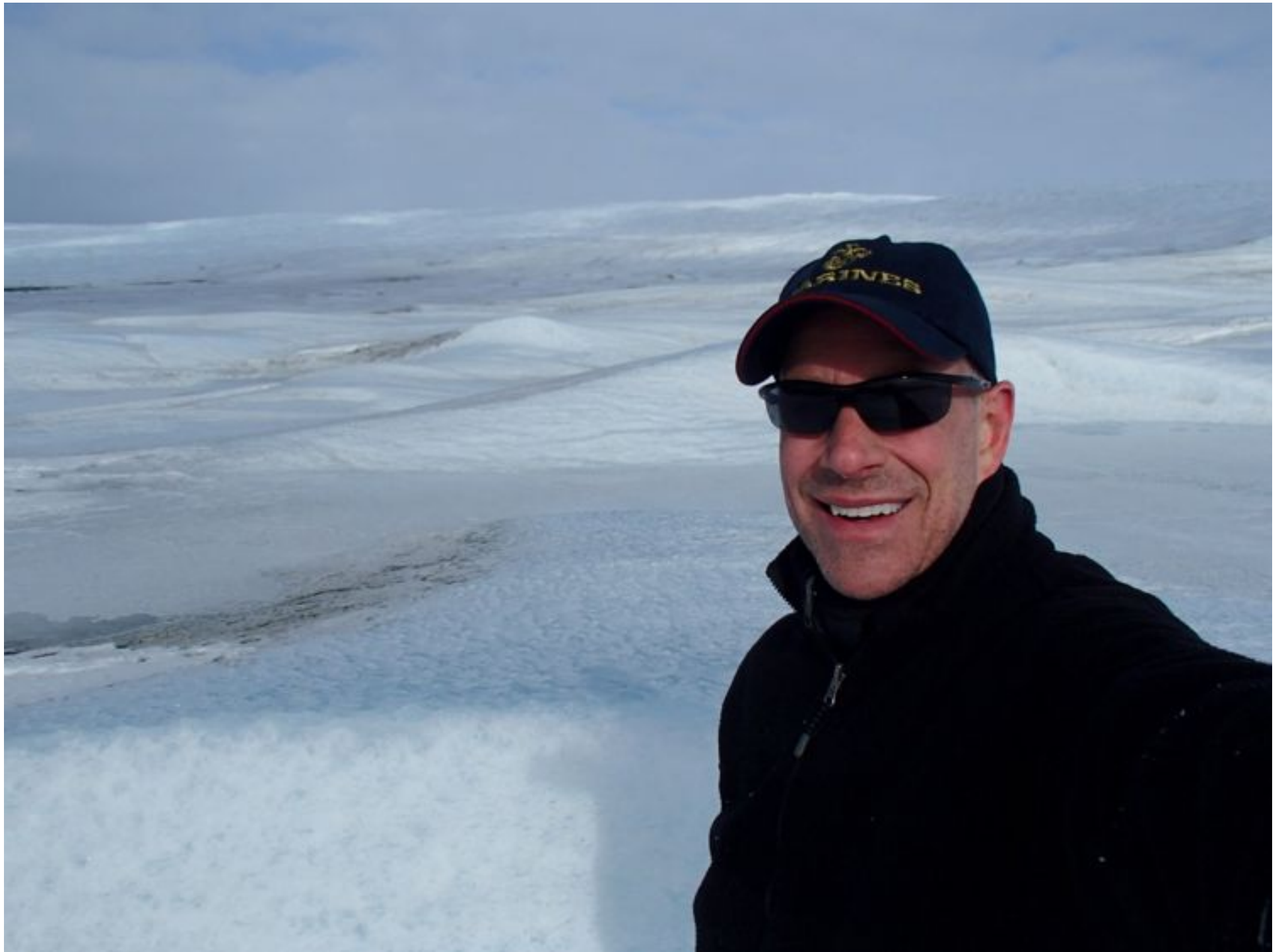


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Views

Unique  
Pageviews

Pageviews













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# Teachers: Join PolarTREC!

[www.polartrec.com/about/join](http://www.polartrec.com/about/join)

Every teacher can participate in different ways:

- **Following Expeditions**
- **Participate in PolarConnect Events**
- **Join the Polar Education Email List**
- **Take Online Professional Development Courses**
- **Become a PolarTREC Teacher!**





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# Upcoming Events

Watch for and register for upcoming events at [www.polartrec.com](http://www.polartrec.com)!



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# Thank You!

*An archive of the event will be available shortly.*  
<http://www.polartrac.com/polar-connect/archive>

