Meeting Goals

- Present Ice Bridge data collected to date
  - Status of data processing
  - Begin preparations for data transfer to NSIDC
- Present the Greenland 2010 campaign schedule and logistics
- Establish flight lines based on science objectives and community input

Science Objectives

- Making airborne altimetry measurements over the ice sheets and sea ice to extend the record of observations begun by ICESat. (Instrument needed: Laser Altimeter)
- Linking the measurements made by ICESat, ICESat-2, and CryoSat-2 to allow accurate comparison and production of a long-term, ice altimetry record. (Instrument needed: Laser Altimeter)
- Using airborne altimetry to monitor key, rapidly changing areas of ice in the Arctic and Antarctic to maintain a long term observation record, improve understanding of glacial dynamics, and improve predictive models of sea level rise and sea ice cover. (Instrument needed: Laser Altimeter, Depth sounding radar, Gravimeter)

Science Objectives

- Monitoring important areas of sea ice for understanding present and future changes in sea ice cover and thickness. (Instrument needed: Laser Altimeter, Radar Altimeter, Near surface radar, Gravimeter)
- In conjunction with altimetry measurements, collecting other remotely sensed data to improve predictive models of sea level rise and sea ice cover, especially the following:
  - Ice thickness and structure (Instrument needed: Depth sounding radar, Gravimeter)
  - Bed topography underlying land-based ice (Instrument needed: Depth sounding radar, Gravimeter)
  - Bathymetry beneath floating ice shelves(Instrument needed: Gravimeter);
  - Snow accumulation and firn structure (Instrument needed: laser altimeter, radar altimeter, Near surface radar)
  - Other geophysical constraints that will improve estimates of the geothermal and oceanic heat flux.

Operation Ice Bridge
Greenland 2010 Campaign
Flight logistics and Schedule

Schedule

- March 22- April 8, 2010 DC-8 in Thule, Greenland
- April 9- April 23, 2010 DC-8 in Keflavik, Iceland
- April 23- May 3, 2010 Transition to P-3 at Wallops
- May 3- May 16, 2010 P-3 in Kangerlussuaq, Greenland
- May 17-May 28, 2010 P-3 in Thule, Greenland

DC-8 Instruments

The DC-8 will operate in phase 1 of the campaign and will be optimized for Sea Ice, LVIS and interior bed mapping flight lines

The DC-8 will be in the same configuration as flown in the Antarctica 2009 campaign

Instruments on Board:

- ATM
- LVIS
- CReSIS radar suite
  - Ku altimeter
  - Snow radar
  - MCORDS-Interior
- Gravimeter
- DMS

P-3 Instruments

The P-3 will operate in phase 2 of the campaign and will be optimized for Outlet Glaciers and interior bed mapping flight lines

Instruments on Board:

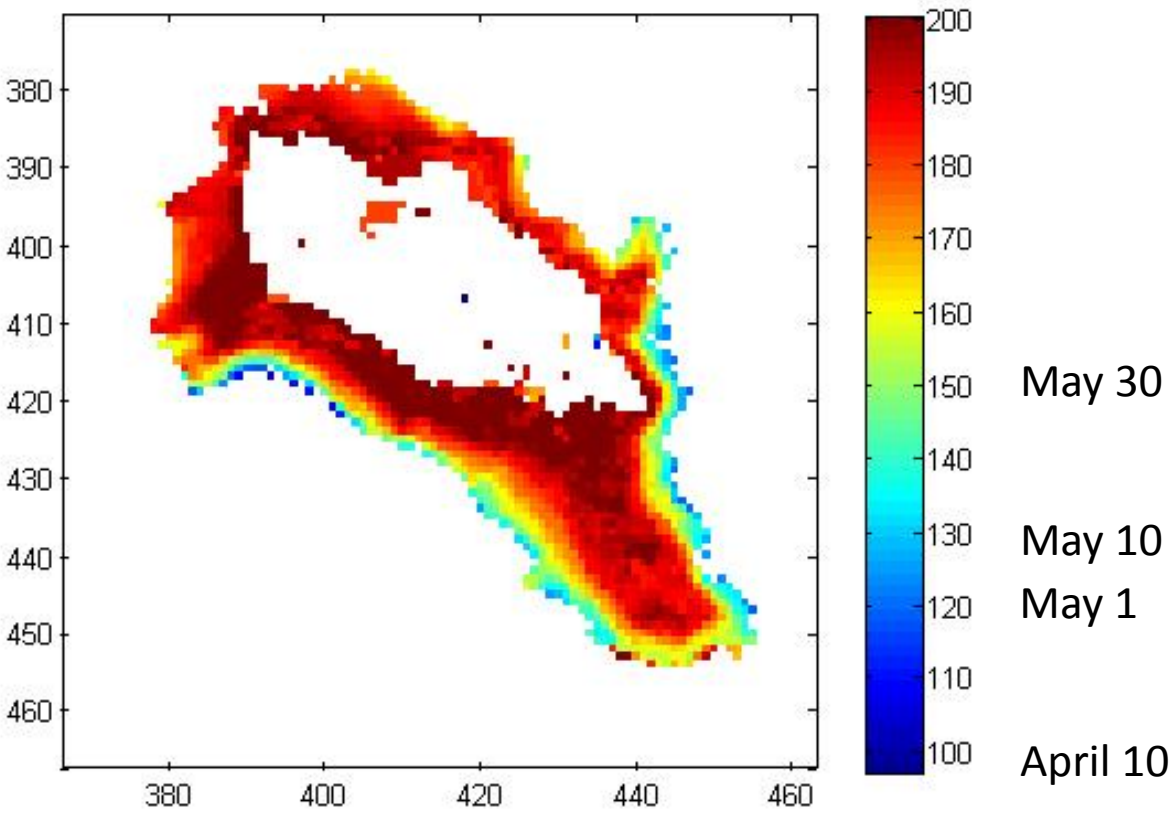
- ATM
- CReSIS radar suite
  - Ku altimeter
  - Snow radar
  - Accumulation radar
  - MCORDS-Outlet Glacier
- Gravimeter
- DMS

Flight Hours

- 100 Hours on the DC-8
- 100 Hours on the P-3
  - ~80 hours of science flight time per aircraft
  - ~10 science flights per aircraft
- Break down
  - 7 Sea Ice flights (1 LVIS)
  - 13 Ice Sheet flights (2 LVIS)

Things to Keep in Mind

- Melt during phase 2
- Community requests
- Field work
- Bed mapping grids/flow lines
- Existing data
- Future planning
- Big Picture Objectives



Break-Out Session Goals

- Sea Ice
  - Plan 8-10 flights (64-80 hours)
  - Prioritize by science objectives and designate LVIS flight
  - Fill out flight line table
- Ice Sheet
  - Plan 14-18 flights (112-144 hours)
  - Prioritize by science objectives and designate LVIS flights
  - Fill out flight line table