

## **OIB Science Team Meeting**

*16-17 June 2015, University of California, Irvine*

Science Teams (Land ice): Ian Joughin, Ian Howat, Mark Fahnestock, Eric Rignot, Eric Larour, Ben Smith, Lora Koenig. (Sea ice): Jackie Richter-Menge, Sinead Farrell, Lora Koenig, Thorsten Markus, Nathan Kurtz. Tom Neumann (ex-officio).

Project Manager(s): John Woods, Christy Hansen.

Project Scientist: Nathan Kurtz.

Program Manager: Thomas Wagner, Bruce Tagg, Charles Webb.

Instrument Team: [ATM, LVIS, DMS, MCoRDS, Snow radar, Gravimeter]

Project Team, NSIDC, Guests.

**Location:** B #417/Croul Hall, Rm 3101 (for joint session); Rm 1101 for sea ice break out

**Start Time:** 9:00 local

### **Land ICE**

	<b>Tuesday</b>	<b>Wednesday</b>
<b>Audio Conference</b>	USA Toll Free: 1-866-467-6272 Passcode: 616772	USA Toll Free: 1-866-467-6272 Passcode: 616772
<b>Web Meeting</b>	<a href="https://nasa.webex.com/nasa/j.php?MTID=mf774a702a4b40d957c63f6cce80d51cb">https://nasa.webex.com/nasa/j.php?MTID=mf774a702a4b40d957c63f6cce80d51cb</a> Meeting Number: 999 579 149 Meeting Password: Cryolab*615	<a href="https://nasa.webex.com/nasa/j.php?MTID=m11d064605fc7191b8ac5518a289790db">https://nasa.webex.com/nasa/j.php?MTID=m11d064605fc7191b8ac5518a289790db</a> Meeting Number: 991 748 086 Meeting Password: Cryolab*615

### **Sea ICE**

	<b>Tuesday</b>	<b>Wednesday</b>
<b>Audio Conference</b>	USA Toll Free: 1-844-467-6272 Participant passcode: 187234	USA Toll Free: 1-844-467-6272 Participant passcode: 187234
<b>Web Meeting</b>	<a href="https://nasa.webex.com/nasa/j.php?MTID=md0c2699af397ec516a8036ce7784c98a">https://nasa.webex.com/nasa/j.php?MTID=md0c2699af397ec516a8036ce7784c98a</a> Meeting Number: 994 868 376 Meeting Password: Cryolab*615	<a href="https://nasa.webex.com/nasa/j.php?MTID=m2d19b057932bf198784b88d79d0ec37d">https://nasa.webex.com/nasa/j.php?MTID=m2d19b057932bf198784b88d79d0ec37d</a> Meeting Number: 993 753 521 Meeting Password: Cryolab*615

**Guests (Land Ice):** BAS (Fausto Ferraccioli, remote), AWI (TBD), UTIG (Duncan Young, TBD), Cryosat (TBD), Bedmachine (Mathieu Morlighem).

**Themes/Goals of meeting:** First goal will be to finalize the mission plan for OIB Antarctica 2015 for land ice and sea ice with a deployment on the GV from Punta Arenas, Chile with LVIS and DMS. We will also discuss the summer campaign 2015 in Greenland and instrument performance in the Spring 2015 OIB campaign. More broadly, a second goal of the meeting will be to understand how the various aircraft options for OIB and associated time constraints will impact instrument selection, data quality and achieving our OIB science objectives. The ST will define a near-term vision for OIB science goals (2016-2019) and identify the top science objectives to achieve in the coming seasons.

**Day 0: Monday, 15 June**

Sea ice OIB Team Breakout meeting. Agenda TBD

**Day 1: Tuesday, 16 June**

Joint sessions with Land ice / Sea ice OIB Team

- 0900 Welcome and Announcements (Eric R./ESS Chair/Jackie)
- 0905 Comments and program direction from NASA (Tom/Bruce)
- 0925 Project management update, status of flights, summer campaigns, update on range, capabilities, instruments, impact of Venture projects on 2016 and beyond, layout of objectives for the meeting (Christy/John)
- 0945 Comments and direction from project science, discussion (Nathan/John/Christy)
- 1010 Update on LVIS – GV (Michelle/Bryan) 10-15 min
- 1030 Break
- 1045 Update on ATM – OIB, C-130 (Jim/Bill/John Sonntag) 10-15 min
- 1105 Update DMS (TBD) – 10 min
- 1115 NSIDC update – data status and update (Steve Tanner) 10 min
- 1125 OIB science objectives for next years + impact of instrument/platforms, layout of objectives (Mark/Eric R/Jackie) (ICESat-2 cal/val, dhdt McMurdo). 30 min
- 1200 Lunch

OIB Land Ice Team/Sea Ice Team Breakout – Thomas Wagner site review – Sea ice breakout.

OIB Land Ice Team

- 1330 Gravity (Kirsty) 15 min
- 1345 OMG (Eric R) 10 min
- 1355 Bed machine (Mathieu M) 15 min
- 1410 Snow radar (Lora) C-130 and others 10 min
- 1420 PROMICE update (Ian J.) 10 min
- 1430 High resolution gravity (Lu A./Pierre G.) 5+10 min
- 1445 World View update (Ian H.) 15 min
- 1500 Break

1515 OIB Alaska Update (Mark Fahnestock) 10 min

1525 CRESIS radar sounding (John/Carl):

- McCords update on P-3, C-130, DC-8 with configuration, expected performance and examples if possible the same areas surveyed by different radars, before and after improved processing, etc., trade off altitude vs radar sounder, 15-25 min
- Greenland update 10 min
- Reasons for limitations of performance in Greenland warm areas 5 min

1600 Prioritize flight lines for 2015 Antarctic campaign (Michele H., Part 1)

- 1) Configuration: GV, Punta-based, LVIS, DMS.
- 2) Coordinate flights with other activities.
- 3) Amend, name and prioritize flight lines.

1700 Adjourn

### OIB Sea Ice Team

1300 STOSIWIG: Summary from 2<sup>nd</sup> meeting, held 15 June 2015 (Gogineni/R-Menge)

1320 IceBridge, ICESat and ICESat-2 (Kwok)

1340 McCORDS for sea ice (Gogineni)

1400 Recent results of waveform-based LVIS and ATM studies (Yi)

1420 IceBridge: Optimizing future missions

- 1) Recap of upcoming deployments (Woods)
- 2) Arctic: Balancing spring and melt season campaigns
  - Impact of shorter spring season campaign
  - Timing of melt season campaign
  - Utilizing model input (e.g. SIPN)
- 3) Optimal configuration(s): Achieving mission goals
  - Instrumentation: Spring versus melt season
  - Platforms
  - Alternate bases of operation
  - Novel partnering in support of extended operations
- 4) Applications for IceBridge: Thinking outside the box
  - Data collection
  - Higher level data products (e.g. snow and ice backscatter)
  - Complementing ICESat-2

1530 Break

- 1600 IceBridge Sea Ice Observations and Products: Update
- 1) Review accomplishments of 2015 Arctic sea ice campaign (R-Menge)
  - 2) Status of sea ice community products data (Kurtz)
    - 2015 IceBridge Quicklook product
    - Detailed description of derived products and consistency/continuity with prior years
  - 3) Data processing and delivery
    - Community sea ice products: Accessibility (Farrell)
    - Data delivery protocols: Establishing timelines and ensuring timeliness (Kurtz)
    - NSIDC: Version control and delivery schedule (Tanner)

1700 Adjourn

## **Day 2: Wednesday, 17 June**

### *OIB Land Ice Team Breakout*

- 0900 Review outcome from Day 1 and goals of day 2 (Eric R.) 10 min
- 0910 Finalize Science Level 1 requirements (Eric R./Ian H./Ben S.) 20 min
- 0930 Impact of platforms + instrument selection on OIB science goals – Summary assessment and recommendations (Ben S./TBD) 20 min
- 0950 Antarctica/Greenland 2016 and beyond – Summary, recommendations, top science objectives (Mark F.) 20 min
- 1010 The future of ice thickness sounding in Greenland’s remaining warm areas (John P./Mathieu/Ian H.) 20 min
- 1030 Break
- 1045 Finalize land ice flight lines for 2015 Antarctic campaign (Michelle H., Part 2)
- 1) Configuration: GV, Punta-based, LVIS, DMS.
  - 2) Coordinate flights with other activities.
  - 3) Amend, name and prioritize flight lines.

1200 Lunch

1330 Wrap up Greenland summer season 2015 and beyond (John/Christy/Lora/Michelle) or Mop up activities.

1400 Meeting adjourns

### *OIB Sea Ice Team Breakout (closed session)*

- 0900 Review of Day 1 proceedings 1 (R-Menge)
- 0915 Draft and prioritize flight lines for 2015 Antarctic campaign (Hofton/Beckley)

- 1) Configuration
    - G-V, Punta-based
    - Instrumentation: LVIS, DMS
  - 2) Review previous recommendations: Punta-based
  - 3) Outline possible coordinated flights with other planned activities
  - 4) Amend, name and prioritize flight line recommendations
- 1000 Discuss preliminary plans for 2015 Fall Arctic Campaign (Sonntag)
- 1) Configuration
    - Falcon, Greenland-based (Kanger and Thule)
    - Instrumentation: ATM, DMS
  - 2) Flight line recommendations
    - Priority repeats of spring flight lines
    - CS-2 under flight
- 1030 OIB Level 1 science requirements
- 1) Review comments
    - Land ice example
    - Input from Thorsten
  - 2) Discuss and finalize revisions
- 1200 Lunch
- 1300 Odds 'n ends
- Spring/Summer 2016
    - Outreach: Non-OIB riders on IceBridge plans
      - NPS (Roberts)
- 1400 Meeting adjourns