

## OIB - C-130H Hercules #439 05/05/15 Science Report

**Date:** Tuesday, May 5, 2015

**Mission:** OIB

**Mission Location:** Thule, Greenland

**Mission Summary:**

Mission: IceSat-2 North / CryoSat-2 SARIn (priority: baseline)

This mission is designed to overfly planned IceSat-2 ground tracks over a wide range of ice regimes near Thule. We center some of the flightlines on each of three beam pairs (left, nadir and right) in turn, sampling at least one of each beam pair during this mission. The east-west crossing line is designed to capture as many ascending/descending crossovers as possible. We also fly a particular flowline of Petermann Glacier which has been sampled intermittently during the ATM and OIB eras, overflying two GCNet sites in the process. Finally we overfly two core sites near Thule, known as "2Barrels" and "North Ice Cap". The flight also crosses the CryoSat-2 SARIn mode pass in this area.

Weather across much of northern Greenland, with the exception of the coastal area southwards from Thule, was clear this morning. We expect the northwestern portion of Greenland to worsen tomorrow as a weakening low pressure system from the south moves in tonight. For this reason, we chose to fly this baseline mission today, with the expectation that either northeast Greenland or some portion of the Arctic Basin may be clear tomorrow for another baseline land ice flight, or perhaps a sea ice flight. We encountered clear skies all day, with the exception of thin ground fog over portions of the Petermann Glacier channel, and also over the Melville Bay coast where two of our IceSat-2 lines extended. Most of the fog was thin enough for the ATM lasers to punch through, however.

We had a little extra time before airfield closing today, so we supplemented this mission with glacier centerline flights of the Pituffik, De Dodes Fjord, and Sidebriksfjord Glaciers, all of which are from the Northwest Glaciers 01 flight.

All instruments performed normally today.

We conducted a ramp overflight at 1500' AGL.

Data volumes:

ATM: 27 Gb

CAMBOT: 91 Gb

DMS: 110 Gb

Ku-Band Radar: 223 Gb

MCoRDS: 2.0 Tb

Narrow Swath ATM: 35 Gb

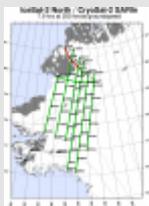
NSERC Onboard Data: TBD

Snow Radar: 223 Gb

total data collection time: 7.8 hrs

**Images:**

### Map of IceSat-2 North / CryoSat-2 SARIn mission



[Read more](#)

### Terrain north of Petermann Glacier



[Read more](#)

## Remains of the Kee Bird



[Read more](#)

Submitted by: John Sonntag on 05/05/15

Related Flight Report:

### C-130H Hercules #439 05/05/15

**Flight Number:** IceSat-2 North / CryoSat-2 SARIn

**Payload Configuration:** OIB

**Nav Data Collected:** No

**Total Flight Time:** 8.2 hours

**Submitted by:** Luci Crittenden on 05/05/15

**Flight Segments:**

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	05/05/15 10:50 Z	<b>Finish:</b>	05/05/15 19:00 Z
<b>Flight Time:</b>	8.2 hours		
<b>Log Number:</b>	<a href="#">151002</a>	<b>PI:</b>	Michael Studinger
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	Completed OIB IceSat 2 mission flying out of Thule.		

**Flight Hour Summary:**

	<b>151002</b>
<b>Flight Hours Approved in SOFRS</b>	334.4
<b>Total Used</b>	297.6
<b>Total Remaining</b>	36.8

#### 151002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">03/12/15</a>	ATF	Check	1.5	1.5	332.9	
<a href="#">03/13/15</a>	PTF - GPS	Check	2	3.5	330.9	
<a href="#">03/13/15</a>	PTF - Radar #1	Check	0.8	4.3	330.1	
<a href="#">03/13/15 - 03/14/15</a>	PTF - Radar #2	Check	4.5	8.8	325.6	
<a href="#">03/16/15</a>	PTF - Radar #3	Check	2.4	11.2	323.2	
<a href="#">03/17/15</a>	Transit	Transit	7.8	19	315.4	
<a href="#">03/19/15</a>	Nansen Gap	Science	7.4	26.4	308	
<a href="#">03/24/15</a>	Sea Ice - Zigzag East	Science	8.2	34.6	299.8	
<a href="#">03/25/15</a>	Sea Ice North Pole Transect - Thule	Science	8.2	42.8	291.6	
<a href="#">03/26/15</a>	Sea Ice - Laxon Line	Science	9.2	52	282.4	
<a href="#">03/27/15 - 03/28/15</a>	Sea Ice - East Beaufort Sea	Science	8.2	60.2	274.2	
<a href="#">03/29/15 - 03/30/15</a>	Sea Ice - North Beaufort Loop	Science	8.9	69.1	265.3	

<a href="#">03/30/15 - 03/31/15</a>	Sea Ice - SIZRS Zigzag	Science	8.1	77.2	257.2
<a href="#">04/01/15</a>	Sea Ice - South Basin Transect	Science	8.8	86	248.4
<a href="#">04/03/15</a>	Sea Ice - South Canada Basin	Science	7.4	93.4	241
<a href="#">04/06/15</a>	OIB Transit from BGTL-BGSF	Transit	3.3	96.7	237.7
<a href="#">04/08/15</a>	Helheim-Kangerdlussuag	Science	8	104.7	229.7
<a href="#">04/09/15</a>	K-EGIG Summit	Science	8.3	113	221.4
<a href="#">04/10/15</a>	Southeast Glaciers 01	Science	8	121	213.4
<a href="#">04/11/15</a>	East Glaciers 01	Science	8	129	205.4
<a href="#">04/13/15</a>	Southeast Coastal	Science	7.7	136.7	197.7
<a href="#">04/14/15</a>	Helheim-Kangerdlussuaq Gap B	Science	7.9	144.6	189.8
<a href="#">04/17/15</a>	Umanaq B	Science	7.5	152.1	182.3
<a href="#">04/18/15</a>	Southwest Coast A	Science	8.1	160.2	174.2
<a href="#">04/20/15</a>	Penny 01	Science	6.3	166.5	167.9
<a href="#">04/21/15</a>	Thomas-Jakobshaven 01	Science	8.7	175.2	159.2
<a href="#">04/22/15</a>	Southeast Flank 01	Science	7.6	182.8	151.6
<a href="#">04/23/15</a>	Jakobshavn-Eqip-Store	Science	9.2	192	142.4
<a href="#">04/24/15</a>	Geikie 02	Science	8.3	200.3	134.1
<a href="#">04/25/15</a>	Jakobshaven 02/ Mop Up	Science	6.9	207.2	127.2
<a href="#">04/27/15</a>	Southwest Coastal B	Science	8	215.2	119.2
<a href="#">04/28/15</a>	Southeast Glaciers 02	Science	7	222.2	112.2
<a href="#">04/29/15</a>	TRANSIT BGSF-BGTL	Transit	2.5	224.7	109.7
<a href="#">04/30/15</a>	ATM Laser Repair Checkout	Science	2.3	227	107.4
<a href="#">05/01/15</a>	NW Coastal A	Science	7.2	234.2	100.2
<a href="#">05/05/15</a>	IceSat-2 North / CryoSat-2 SARIn	Science	8.2	242.4	92
<a href="#">05/06/15</a>	North Glaciers 01	Science	8.2	250.6	83.8
<a href="#">05/07/15</a>	Devon-Barnes 01	Science	7.8	258.4	76
<a href="#">05/08/15</a>	Zigzag West	Science	7.2	265.6	68.8
<a href="#">05/11/15</a>	Northwest Glaciers 01	Science	7.8	273.4	61
<a href="#">05/12/15</a>	North-Central Gap 02	Science	8.1	281.5	52.9
<a href="#">05/15/15</a>	North-Central Gap 01	Science	7.3	288.8	45.6
<a href="#">05/21/15</a>	Transit - Thule to Bangor, ME	Transit	6.5	295.3	39.1
<a href="#">05/22/15</a>	Transit - Bangor, ME to WFF	Transit	2.3	297.6	36.8

*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

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NASA Official: Bruce A. Tagg

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