

## OIB - C-130 Hercules #439 03/19/15 Science Report

**Date:** Thursday, March 19, 2015

**Mission:** OIB

**Mission Location:** Thule, Greenland

**Mission Summary:**

Mission: Sea Ice - Nansen Gap

This is a modified version of the Fram Gateway missions flown in several of the past years. It differs from them in that it transits to and from the area of the Fram Strait at high-altitude, leaving more time to sample ice farther north and east than in prior years. In addition to Level 1 Requirements SI1 and SI2, this mission addresses sea ice level 1 baseline requirements SI3c and d by sampling sea ice north of Fram Strait.

In addition to the above, we also conducted three overpasses of the Norwegian research vessel Lance, which was intentionally frozen into the ice pack north of Svalbard in order to conduct wide-ranging scientific experiments. One of these was a detailed survey of snow and ice thickness on a 400m by 60m grid near the ship. In coordination with the OIB science team and our Norwegian colleagues, we arranged to overfly this grid in order to validate our own measurements and to help contextualize theirs over a much wider area. We flew the first pass to orient ourselves to the geometry of the ship and the survey grid, then flew two additional passes over the grid itself.

Due to an airfield-related delay in obtaining fuel prior to our launch this morning, we were forced to delay our takeoff by 45 minutes, and this in turn required us to break off the southern portion of our survey line earlier than planned so that we could land in Thule before their fixed airport closing time of 1600 local. As a result we have determined to load most fuel in the evenings, after flights, with just brief top-offs in the mornings.

We conducted a calibration ramp pass above Thule at 1500' AGL.

Data volumes:

ATM: 13 Gb

CAMBOT: 65 Gb

DMS: 49 Gb

Ku-Band Radar: 42 Gb

MCoRDS: 326 Gb

Narrow Swath ATM: 28 Gb

NSERC Onboard Data: TBD

Snow Radar: 42 Gb

low-altitude data collection time: 2.2 hrs

high-altitude data collection time: 4.7 hrs

total data collection time: 6.9 hrs

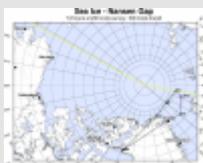
**Images:**

### R/V Lance Overflown By OIB



[Read more](#)

### Map of Sea Ice - Nansen Gap Mission



[Read more](#)

Submitted by: John Sonntag on 03/19/15

Related Flight Report:

## C-130 Hercules #439 03/19/15

Flight Number: Nansen Gap

Payload Configuration: OIB

Nav Data Collected: No

Total Flight Time: 7.4 hours

Submitted by: Cate Easmunt on 03/19/15

Flight Segments:

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	03/19/15 11:35 Z	<b>Finish:</b>	03/19/15 19:00 Z
<b>Flight Time:</b>	7.4 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		

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.*

Page Last Updated: April 22, 2017

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