

OIB - C-130H Hercules #439 05/01/15 Science Report

Date: Friday, May 1, 2015

Mission: OIB

Mission Location: Thule, Greenland

Mission Summary:

Mission: Northwest Coastal A (priority: high)

This is a new mission, created from the 2010-2012 "Northwest Coastal" suite of missions by sampling individual coast-parallel lines from those flights to form a grid spaced at 30-35 km from the coast to near the 2000m contour line. This is one of three missions designed in this way, which together form a 10 km grid in the area. The others are Northwest Coastal B and C. We had to delete the two additional bedrock-mapping lines in the Tracy/Heilprin catchment due to the reduced Friday airport hours at Thule. However we did have time to supplement this mission with the much shorter centerline runs of the Tracy and Heilprin Glaciers, which are normally part of the low-priority Alexander-Petermann mission.

Weather images showed perfectly clear skies all along the Melville Bay coast this morning during pre-flight. However, in mid-spring on into summer, this area is always vulnerable to coastal fog, due to the rapidly melting sea ice offshore and slight onshore winds carrying that moisture uphill. These winds in turn are due to the clockwise circulation around the high pressure system that normally sits atop the Greenland ice sheet for much of the year. We saw this effect today on our first, and seaward-most, line, where we encountered some scattered to broken overcast at roughly our altitude. As a result we lost perhaps 15% of ATM and DMS data on this line. The three inland lines were perfectly clear.

All instruments performed normally today, including the recently-repaired ATM T3 transceiver.

We conducted a ramp overflight at 1000' AGL.

Data volumes:

ATM: 24 Gb

CAMBOT: 87 Gb

DMS: 132 Gb

Ku-Band Radar: 208 Gb

MCoRDS: 1.8 Tb

Narrow Swath ATM: 31 Gb

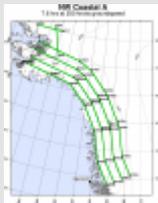
NSERC Onboard Data: TBD

Snow Radar: 208 Gb

total data collection time: 6.9 hrs

Images:

Map of Northwest Coastal A



[Read more](#)

Crevassing



[Read more](#)

Cornell Glacier



[Read more](#)

Lower Heilprin Glacier



[Read more](#)

Submitted by: John Sonntag on 05/02/15

Related Flight Report:

C-130H Hercules #439 05/01/15

Flight Number: NW Coastal A

Payload Configuration: OIB

Nav Data Collected: No

Total Flight Time: 7.2 hours

Submitted by: Luci Crittenden on 05/02/15

Flight Segments:

From:	BGTL	To:	BGTL
Start:	05/01/15 10:55 Z	Finish:	05/01/15 18:05 Z
Flight Time:	7.2 hours		
Log Number:	151002	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Completion of first science data out of Thule for this phase of the OIB deployment		

Flight Hour Summary:

	151002
Flight Hours Approved in SOFRS	334.4
Total Used	297.6
Total Remaining	36.8

151002 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/12/15	ATF	Check	1.5	1.5	332.9	
03/13/15	PTF - GPS	Check	2	3.5	330.9	
03/13/15	PTF - Radar #1	Check	0.8	4.3	330.1	
03/13/15 - 03/14/15	PTF - Radar #2	Check	4.5	8.8	325.6	
03/16/15	PTF - Radar #3	Check	2.4	11.2	323.2	
03/17/15	Transit	Transit	7.8	19	315.4	

03/19/15	Nansen Gap	Science	7.4	26.4	308
03/24/15	Sea Ice - Zigzag East	Science	8.2	34.6	299.8
03/25/15	Sea Ice North Pole Transect – Thule	Science	8.2	42.8	291.6
03/26/15	Sea Ice - Laxon Line	Science	9.2	52	282.4
03/27/15 - 03/28/15	Sea Ice - East Beaufort Sea	Science	8.2	60.2	274.2
03/29/15 - 03/30/15	Sea Ice - North Beaufort Loop	Science	8.9	69.1	265.3
03/30/15 - 03/31/15	Sea Ice - SIZRS Zigzag	Science	8.1	77.2	257.2
04/01/15	Sea Ice - South Basin Transect	Science	8.8	86	248.4
04/03/15	Sea Ice - South Canada Basin	Science	7.4	93.4	241
04/06/15	OIB Transit from BGTL-BGSF	Transit	3.3	96.7	237.7
04/08/15	Helheim- Kangerdlussuag	Science	8	104.7	229.7
04/09/15	K-EGIG Summit	Science	8.3	113	221.4
04/10/15	Southeast Glaciers 01	Science	8	121	213.4
04/11/15	East Glaciers 01	Science	8	129	205.4
04/13/15	Southeast Coastal	Science	7.7	136.7	197.7
04/14/15	Helheim- Kangerdlussuaq Gap B	Science	7.9	144.6	189.8
04/17/15	Umanaq B	Science	7.5	152.1	182.3
04/18/15	Southwest Coast A	Science	8.1	160.2	174.2
04/20/15	Penny 01	Science	6.3	166.5	167.9
04/21/15	Thomas-Jakobshaven 01	Science	8.7	175.2	159.2
04/22/15	Southeast Flank 01	Science	7.6	182.8	151.6
04/23/15	Jakobshavn-Eqip-Store	Science	9.2	192	142.4
04/24/15	Geikie 02	Science	8.3	200.3	134.1
04/25/15	Jakobshaven 02/ Mop Up	Science	6.9	207.2	127.2
04/27/15	Southwest Coastal B	Science	8	215.2	119.2
04/28/15	Southeast Glaciers 02	Science	7	222.2	112.2
04/29/15	TRANSIT BGSF-BGTL	Transit	2.5	224.7	109.7
04/30/15	ATM Laser Repair Checkout	Science	2.3	227	107.4
05/01/15	NW Coastal A	Science	7.2	234.2	100.2
05/05/15	IceSat-2 North / CryoSat-2 SARIn	Science	8.2	242.4	92
05/06/15	North Glaciers 01	Science	8.2	250.6	83.8
05/07/15	Devon-Barnes 01	Science	7.8	258.4	76
05/08/15	Zigzag West	Science	7.2	265.6	68.8
05/11/15	Northwest Glaciers 01	Science	7.8	273.4	61
05/12/15	North-Central Gap 02	Science	8.1	281.5	52.9
05/15/15	North-Central Gap 01	Science	7.3	288.8	45.6
05/21/15	Transit - Thule to Bangor, ME	Transit	6.5	295.3	39.1
05/22/15	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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