

## OIB - C-130H Hercules #439 05/07/15 Science Report

**Date:** Thursday, May 7, 2015

**Mission:** OIB

**Mission Location:** Thule, Greenland

**Mission Summary:**

Mission: Devon-Barnes 01 (priority: high)

This mission repeats survey lines over the Barnes and Devon Ice Caps previously surveyed by the ATM/KU teams in 1995, 2000, 2005, and 2011, and adds several new lines over the Barnes Ice Cap. We also fly the East and West channels of the Belcher Glaciers, draining the northeastern Devon Ice Cap.

Weather this morning was a real challenge. Widespread clouds and coastal fog affected all of northern Greenland except for a few small and scattered clear areas, none of them large enough to warrant a science mission. The Arctic basin was covered in fog in all but a few areas similarly scattered. Devon Island was clear, however, and the Barnes Ice Cap on Baffin Island was partially covered in cloud from an approaching low pressure system to the south. This mission was the best of the bad choices, and we launched it expecting success over Devon, but probably not at Barnes. We developed a contingency plan to survey several glaciers on Bylot Island (near Devon Island and also clear) if Barnes proved to be socked in, and also arranged the flight plan to address Barnes first, since its weather would get worse as the day progressed. In the event, we apparently encountered a fortuitous "hole" in the weather, and Barnes proved to be almost completely clear during the time we were there. We successfully gathered data across 99% of the flight lines at both science targets.

All instruments performed normally today.

We conducted a ramp overflight at 1000' AGL.

Data volumes:

ATM: 20 Gb

CAMBOT: 84 Gb

DMS: 64 Gb

Ku-Band Radar: 141 Gb

MCoRDS: 1.3 Tb

Narrow Swath ATM: 33 Gb

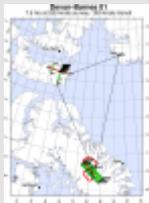
NSERC Onboard Data: TBD

Snow Radar: 141 Gb

total data collection time: 6.9 hrs

**Images:**

### Map of Devon-Barnes 01



[Read more](#)

### Moraines on Baffin Island



[Read more](#)

## Belcher Glacier



[Read more](#)

Submitted by: John Sonntag on 05/07/15

Related Flight Report:

## C-130H Hercules #439 05/07/15

Flight Number: Devon-Barnes 01

Payload Configuration: OIB

Nav Data Collected: No

Total Flight Time: 7.8 hours

Submitted by: Luci Crittenden on 05/07/15

Flight Segments:

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	05/07/15 10:50 Z	<b>Finish:</b>	05/07/15 18:40 Z
<b>Flight Time:</b>	7.8 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>	Devon-Barnes 01 mission over Canada completed today.		

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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