OIB - C-130H Hercules #439 04/08/15 Science Report

Aircraft:
C-130H Hercules #439 (See full schedule)
Date:
Wednesday, April 8, 2015
Mission:
OIB
Mission Location:
Kangerlussuaq, Greenland
Mission Summary:

Mission: Helheim-Kangerdlugssuaq

This is a repeat mission, and is very similar to missions flown in 2010, 2011, 2012 and 2013. It captures centerline surveys of the two main branches of Helheim, of Kangerdlugssuaq, Fenris and of several branches of Midgard glaciers. We also refly the centerline of the Hutchinson Glacier, and establish a new centerline of a glacier which empties into the fjord of Kangerdlugssuaq Glacier just beyond its terminus.

Today was the first land ice science flight of the campaign, and our first flight originating from Kangerlussuaq. Flights from Kangerlussuaq early in the spring season impose special challenges to the field team, because the lack of a suitable hangar here means that the aircraft and science instruments must cold-soak outside each night. This makes startup challenging each morning. However, the science team and flight crew benefitted from the experience and hard work of the maintenance team, who begin work here exceptionally early each morning in order to warm up the aircraft's engines and interior before the rest of the team arrives. As a result we had no problems at all with startup operations, which may be a first for OIB early springtime operations here.

Weather over the science targets today was very clear early in the day, but was forecast to worsen from south to north as the day progressed. As a result, we re-sequenced this flight to proceed from south to north. The results were excellent. The weather indeed worsened as predicted, but the ceilings remained high enough to complete the southern sites without problems. The northern and interior sites remained clear except for some cloudiness along the western ice margin near Kangerlussuaq.

All sensors operated normally today, with no problems at all.

Data volumes:
ATM: 24 Gb
CAMBOT: 83 Gb
DMS: 137 Gb
Ku-Band Radar: 194 Gb
MCoRDS: 2.2 Tb
Narrow Swath ATM: 31 Gb
NSERC Onboard Data: TBD
Snow Radar: 194 Gb

total data collection time: 6.7 hrs

Images:

Icebergs in Kangerdlugssuaq fjord

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Kangerdlugssuaq Glacier calving front

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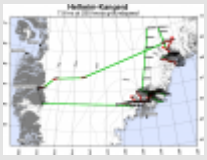
Map of Helheim-Kangerdlugssuaq



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Submitted by:
John Sonntag on 04/08/15
Related Flight Report:

C-130H Hercules #439 04/08/15

Flight Number:
Helheim-Kangerdlussuag
Payload Configuration:
OIB
Nav Data Collected:
No
Total Flight Time:
8 hours
Submitted by:
Luci Crittenden on 04/08/15
Flight Segments:

From:	BGSF	**To:**	BGSF
Start:	04/08/15 10:15 Z	**Finish:**	04/08/15 18:15 Z
Flight Time:	8 hours		
Log Number:	151002	**PI:**	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	First science flight out of Kangerlussuaq for the OIB 2015 campaign		

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**
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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