OIB - HU-25C Guardian #524 09/15/16 Science Report

Aircraft: HU-25A Guardian - LaRC #524 (See full schedule)
Date: Thursday, September 15, 2016
Mission: OIB
Mission Location: Kangerlussuaq, Greenland
Mission Summary:

Mission: Falcon East Glaciers 01 (priority: high)

This mission is a shortened version of the East Glaciers 01 mission last flown in Spring 2015. In order to accommodate the shorter range of the Falcon jet, we eliminated six glacier centerlines in the far eastern portion of the flight. We also added an overflight of the IceSat 0412 cal/val site near Summit Camp.

Fortune favored the bold today, but she kept us on the edge of our seats up until the very last moment. This morning's satellite imagery showed an absence of strong organized weather systems around central Greenland, but it also showed widespread ground fog across the central ice divide, stretching west about halfway to that coast, with scattered to broken ground fog east of the divide. Summit Station's live webcam also showed dense fog there this morning. This morning was our last flight opportunity of the campaign, and this mission was the last remaining high-priority flight in our quiver. Reasoning that progressive solar heating as the sun rose higher would probably dissipate some of the fog, we delayed our takeoff by two hours to allow for more heating to occur, and launched this flight at 1000 local time. We found that the laws of thermodynamics indeed held true, and that much of the fog either dissipated or rose to form patches of thin stratus on and east of the divide. From the divide to the west, the stratus layer remained solid. At Summit Station itself, a patch of stratus held off a (very) few miles south of the station, just far enough for us to obtain excellent lidar elevation data on the IceSat 412 cal/val line. The lidar returns ended due to the clouds less than 15 seconds after we completed the 412 line. All in all, we succesfully acquired data across approximately 50% of the mission, with solid data along the most interesting eastern and Summit portions.

All instruments performed well.

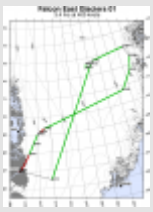
We conducted a ramp pass at 16,000'.

Data volumes:
CAMBOT: 7 images
Narrow Swath ATM: 20 Gb
FLIR: 9.2 Gb

total data collection time: 3.3 hrs

Images:

Map of Falcon - East Glaciers 01



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Daugard-Jensen Glacier

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Summit Station

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Submitted by: John Sonntag on 10/01/16
Related Flight Report:

HU-25A Guardian #524 09/15/16

Flight Number: OIB 2016 on HU-25 #34
Payload Configuration: ATM
Nav Data Collected: No
Total Flight Time: 3.7 hours
Submitted by: Richard Yasky on 09/30/16
Flight Segments:

From:	BGSF	**To:**	BGSF
Start:	09/15/16 11:51 Z	**Finish:**	09/15/16 15:32 Z
Flight Time:	3.7 hours		
Log Number:	16F003	**PI:**	Nathan Kurtz
Funding Source:	Thomas Wagner - NASA - SMD - ESD Cryospheric Science		
Purpose of Flight:	Science		
Comments:	After waiting through a down day for weather to clear on East Glacier 1 and SUmmit, the mission scientist decided to wait just a little longer for takeoff due to Summit being fogged in but expected to clear. Large portions of the Icecap was obscured by low clouds but the east glacier area was clear as was the Summit Cal/Val line to just south of the camp. Great weather call from Sonntag got the critical piece of Summit data we had been waiting for. Ramp pass at FL160. Next flight planned for tomorrow begins the transit to Palmdale for ATM download		

Flight Hour Summary:

	16F003
Flight Hours Approved in SOFRS	121.25
Total Used	126.9
Total Remaining	-5.65

16F003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
06/29/16	OIB 2016 on HU25A ICF	Science	2	2	119.25	
07/11/16	OIB 2016 on HU25A #1	Ferry	2.6	4.6	116.65	

07/11/16	OIB 2016 on HU25A #2	Ferry	2.5	7.1	114.15
07/11/16 - 07/12/16	OIB 2016 on HU25A #3	Ferry	2.2	9.3	111.95
07/12/16 - 07/13/16	OIB 2016 on HU25A #4	Ferry	2.6	11.9	109.35
07/13/16	OIB 2016 on HU25A #5	Science	3.4	15.3	105.95
07/14/16	OIB 2016 on HU25A #6	Science	3.5	18.8	102.45
07/15/16	OIB 2016 on HU25A #7	Science	3.7	22.5	98.75
07/19/16 - 07/20/16	OIB 2016 on HU25A #8	Science	3.6	26.1	95.15
07/20/16	OIB 2016 on HU25A #9	Science	3.4	29.5	91.75
07/21/16	OIB 2016 on HU25A #10	Science	3.6	33.1	88.15
07/22/16	OIB 2016 on HU25A #11	Ferry	3.9	37	84.25
07/22/16	OIB 2016 on HU25A #12	Ferry	3.2	40.2	81.05
07/22/16	OIB 2016 on HU25A #13	Ferry	2.1	42.3	78.95
08/23/16	OIB 2016 on HU-25 #14	Science	2.3	44.6	76.65
08/25/16	OIB 2016 on HU-25 #15	Ferry	3.2	47.8	73.45
08/25/16	OIB 2016 on HU-25 #16	Ferry	2.2	50	71.25
08/27/16	OIB 2016 on HU-25 #17	Science	3.7	53.7	67.55
08/29/16	OIB 2016 on HU-25 #18	Science	3.8	57.5	63.75
08/29/16	OIB 2016 on HU-25 #19	Science	3.5	61	60.25
09/01/16	OIB 2016 on HU-25 #20	Science	3.4	64.4	56.85
09/02/16	OIB 2016 on HU-25 #21	Science	3.8	68.2	53.05
09/02/16	OIB 2016 on HU-25 #22	Science	3.8	72	49.25
09/05/16	OIB 2016 on HU-25 #23	Science	0.6	72.6	48.65
09/06/16	OIB 2016 on HU-25 #24	Science	3.5	76.1	45.15
09/09/16	OIB 2016 on HU-25 #25	Science	3.5	79.6	41.65
09/09/16	OIB 2016 on HU-25 #26	Science	3.5	83.1	38.15
09/10/16	OIB 2016 on HU-25 #27	Science	3	86.1	35.15
09/11/16	OIB 2016 on HU-25 #28	Science	3.9	90	31.25
09/11/16	OIB 2016 on HU-25 #29	Science	3.7	93.7	27.55

09/12/16	OIB 2016 on HU-25 #30	Science	3.3	97	24.25
09/12/16	OIB 2016 on HU-25 #31	Science	2.7	99.7	21.55
09/13/16	OIB 2016 on HU-25 #32	Science	4	103.7	17.55
09/13/16	OIB 2016 on HU-25 #33	Science	2.9	106.6	14.65
09/15/16	OIB 2016 on HU-25 #34	Science	3.7	110.3	10.95
09/16/16	OIB 2016 on HU-25 #35	Ferry	2.4	112.7	8.55
09/16/16	OIB 2016 on HU-25 #35	Ferry	1.7	114.4	6.85
09/16/16	OIB 2016 on HU-25 #35	Ferry	1.7	116.1	5.15
09/17/16	OIB 2016 on HU-25 #38	Ferry	2.8	118.9	2.35
09/17/16	OIB 2016 on HU-25 #38	Ferry	2.9	121.8	-0.55
09/19/16	OIB 2016 on HU-25 #40	Ferry	2.5	124.3	-3.05
09/19/16	OIB 2016 on HU-25 #40	Ferry	2.6	126.9	-5.65

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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