

P-3 Orion 05/14/14

Aircraft:

P-3 Orion - WFF ([See full schedule](#))

Flight Number:

Science Flight - Northeast Grid 01

Payload Configuration:

Operation IceBridge

Nav Data Collected:

Yes

Total Flight Time:

7.7 hours

Submitted by:

Luci Crittenden on 05/14/14

Flight Segments:

From:	BGTL	To:	BGTL
Start:	05/14/14 11:05 Z	Finish:	05/14/14 18:44 Z
Flight Time:	7.7 hours		
Log Number:	14P008	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Northeast Grid 01 mission completed out of Thule for OIB today		

Flight Hour Summary:

	14P008
Flight Hours Approved in SOFRS	369
Total Used	354.1
Total Remaining	14.9

14P008 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/06/14	1767	Check	1.3	1.3	367.7	
03/06/14	1768	Check	2.7	4	365	
03/07/14	1769	Check	5.7	9.7	359.3	
03/10/14	WFF to Thule Transit	Transit	8.1	17.8	351.2	
03/12/14	Sea Ice - Nansen Gap	Science	7.6	25.4	343.6	
03/13/14	Sea Ice - Zig Zag East	Science	7.7	33.1	335.9	
03/14/14	Thule - Fairbanks Transit: Sea Ice - Laxon Line	Science	8.8	41.9	327.1	
03/15/14 - 03/16/14	Sea Ice - SIZRS ZigZag	Science	8.1	50	319	
03/17/14 - 03/18/14	Sea Ice - North Beaufort Loop - with Barrow	Science	8.2	58.2	310.8	
03/18/14 - 03/19/14	F06 Sea Ice - East Beaufort - with ONR/MIZ/CryoVEx camp	Science	8.2	66.4	302.6	
03/19/14 - 03/20/14	F07 Sea Ice - Beaufort - Chukchi Diamond	Science	8.3	74.7	294.3	
03/21/14	F08: Sea Ice ? South Basin Transect	Science	8.5	83.2	285.8	
03/24/14	F09: Sea Ice ? Giles Gateway	Science	8	91.2	277.8	
03/25/14	F10 - Axel Heiberg-Eureka	Science	3	94.2	274.8	
03/26/14	F11 - Zigzag West	Science	7.9	102.1	266.9	
03/28/14	Sea Ice ? South Canada Basin	Science	7	109.1	259.9	
03/31/14	F13 Sea Ice ? CryoVEx Nord	Science	7.3	116.4	252.6	

04/03/14	F15 Sea Ice - North Canada Basin	Science	8.2	124.6	244.4
04/04/14	Transit from Thule to Kangerlussuaq	Transit	2.8	127.4	241.6
04/05/14	Science Flight #16 - East Glaciers	Science	7.8	135.2	233.8
04/07/14	Science Flight - Southwest Coastal A	Science	7.7	142.9	226.1
04/08/14	Science Flight - Southeast Glacier 01	Science	7.6	150.5	218.5
04/09/14	Science Flight - Jakobshaven Glacier 01	Science	8	158.5	210.5
04/10/14	Science Flight - K-EGIG Summit Mission	Science	7.9	166.4	202.6
04/12/14	Science Flight - OSU Clusters	Science	6.6	173	196
04/14/14	Science Flight - Jakobshavn-Eqip-Store	Science	7.7	180.7	188.3
04/15/14	Science Flight - Southwest Glacier 01	Science	7.3	188	181
04/16/14	Science Flight - IceSat 2 Central	Science	8.4	196.4	172.6
04/19/14	Science Flight - Jakobshaven 02	Science	6.4	202.8	166.2
04/21/14	Science Flight - Geikie Glacier 01	Science	8.6	211.4	157.6
04/23/14	Science Flight - Baffin 02	Science	6	217.4	151.6
04/24/14	Science Flight - Helheim-Kangerd	Science	8.2	225.6	143.4
04/25/14	Transit Flight - Kangerlussuaq to Thule	Transit	2.6	228.2	140.8
04/26/14	Science Flight - NW Glacier 02 Mop-Up	Science	5.6	233.8	135.2
04/28/14	Science Flight - North Pole Transect	Science	7.3	241.1	127.9
04/29/14	Science Flight - Northeast Glaciers 01	Science	7.8	248.9	120.1
04/30/14	Science Flight - Northeast Grid 01	Science	2.6	251.5	117.5
05/01/14	Science Flight - Humboldt 01	Science	5.5	257	112
05/02/14	Science Flight - Cryosat Land	Science	7	264	105
05/05/14	Science Flight - IceSat 2 - North	Science	8	272	97
05/07/14	Science Flight - NW Glaciers 01	Science	8	280	89
05/08/14	Science Flight - North Central Gap 01	Science	8	288	81
05/09/14	Science Flight - NW Coastal B	Science	6.9	294.9	74.1
05/12/14	Science Flight - Alexander-Petermann 01	Science	7	301.9	67.1
05/14/14	Science Flight - Northeast Grid 01	Science	7.7	309.6	59.4
05/15/14	Science Flight - Northeast Grid 06	Science	8	317.6	51.4
05/16/14	Science Flight - NW Coastal C	Science	6.1	323.7	45.3
05/19/14	Science Flight - North Glaciers 02 Prime	Science	8	331.7	37.3
05/20/14	Science Flight - Northwest Mopup	Science	6.5	338.2	30.8

05/21/14	Science Flight - Northeast Grid 04	Science	7.9	346.1	22.9
05/23/14	Transit Flight - Thule to Wallops	Transit	7.5	353.6	15.4
05/23/14	Transit Flight - Thule to Wallops	Transit	0.5	354.1	14.9

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.

Related Science Report:

OIB - P-3 Orion 05/14/14 Science Report

Mission:

OIB

Mission Summary:

F41 Northeast Grid 01

Accomplishments

- Low-altitude survey (1,500 ft AGL) over northeast Greenland.
- ATM, albedo, KT-19, snow, Ku-band, accumulation, MCoRDS and DMS were operated on the survey lines.
- Ramp pass at Thule at 1,000 ft AGL for instrument calibration.
- Pitch maneuvers over sea ice/water in the North Star Bay for instrument calibration.
- Satellite tracks: ICESat 1334, 0099.
- Repeat Mission: new mission but partial repeats going back to the 1990s.

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	65 GB	None.
DMS	yes	106 GB	None.
Snow Radar	yes	416 GB	None.
Ku-band Radar	yes	416 GB	None.
Accumulation Radar	yes	145 GB	None.
MCoRDS	yes	1.9 TB	None.
KT-19	yes	9 MB	None.
Albedo	yes	6 GB	None.

Mission Report (Michael Studinger, Mission Scientist)

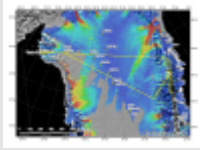
This flight is a new mission, one of a suite of six flights intended to thoroughly sample the bedrock topography of northeast Greenland along a series of nearly coast-parallel ICESat lines. At the same time we obtained altimetry measurements along the ICESat tracks which will enable the calculation of dh/dt over a broad area and a significant time span. This particular mission focused on the easternmost of the coast-parallel lines, and we also sampled a pair of 1990s ATM altimetry tracks over north central Greenland, which should yield an even longer dh/dt record over ice which may be thickening in the central part of the ice sheet.

The crew did an excellent job in completing a required pressurization test this morning, which allowed us to complete the entire science mission as planned. LiDAR data collection started 05/14/2014 11:12 UTC and ended at 18:38 UTC. In total we collected 7.4 hours of science data. The weather was perfect. We only encountered a solid layer of low clouds for 15 minutes after takeoff, which prevented us from descending onto the survey line to

Camp Century.

Images:

Figure 1: Today's trajectory in yellow.



[Read more](#)

Submitted by:

Michael Studinger on 05/14/14

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