

OIB - P-3 Orion 03/29/17 Science Report

Aircraft:

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

Date:

Wednesday, March 29, 2017

Mission:

OIB

Mission Location:

Greenland

Mission Summary:

OIB completed the high priority North Ellesmere 01 mission. This was a new mission, designed as part of OIB's multi-year dh/dt repeat strategy, and based both on the ATM surveys of the Canadian ice caps dating back to 1995, and to flightlines designed with Dave Burgess and Martin Sharp as part of a CSA/NASA agreement in 2014 and flown that same year. This mission concentrates on the northern Ellesmere ice field and on the Agassiz Ice Cap in east-central Ellesmere. For the northern ice field, we flew a historical ATM line traversing the ice from southwest to northeast plus centerlines of the major glaciers draining the ice field. We also flew a number of such glaciers on Agassiz, along with a pair of historical ATM lines.

The weather forecast over Ellesmere Island looked to be largely clear near the beginning of the flight but worsening (mainly in the north) later in the day. We elected to take the mission as it seemed likely we would still be able to get coverage over most of the lines. The weather was largely good, but with patches of scattered haze and clouds at times. This did not significantly impact the mission though we did miss some small areas and the lower portion of Yelverton Glacier line due to poor visibility. The FLIR window frosted over early during the transit and took some time to clear up which will impact the data quality. But overall the mission was good, with data collected over nearly the entire line.

Data volumes

ATM: T5: 27 Gb T6: 120 Gb

FLIR: 14 Gb

Cambot: 31 Gb

KT19: 10 Mb

DMS: 62 Gb

Snow/Ku radar: 1.2 Tb

MCoRDS: 1.6 Tb

Accumulation radar: 1.3 Tb

Gravity: 3 Gb

data on: 1146

data off: 1738

Submitted by:

Nathan T. Kurtz on 03/29/17

File:

 [nellesmere.pdf](#)

Related Flight Report:

P-3 Orion 03/29/17

Flight Number:

Science Flight #12 - Ellesmere Island 01 Line

Payload Configuration:

OIB Arctic

Nav Data Collected:

No

Total Flight Time:

7.6 hours

Submitted by:

Janet Letchworth on 03/29/17

Flight Segments:

From:	BGTL	To:	BGTL
Start:	03/29/17 10:53 Z	Finish:	03/29/17 18:28 Z

Flight Time:	7.6 hours		
Log Number:	17P006	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	This flight covered the Ellesemere Island 01 Line.		

Flight Hour Summary:

	17P006
Flight Hours Approved in SOFRS	333.6
Total Used	332
Total Remaining	1.6

17P006 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
02/24/17	Airworthiness Test Flight	Check	1	1	332.6	
02/26/17	Project Test Flight #1	Check	4.9	5.9	327.7	
02/27/17	Project Test Flight #2	Check	3	8.9	324.7	
03/07/17	Transit Flight	Transit	8.2	17.1	316.5	
03/09/17	Science Flight #1 - North Pole Transect	Science	8	25.1	308.5	
03/10/17	Science Flight #2 - Laxon Line	Science	8.5	33.6	300	
03/11/17 - 03/12/17	Science Flight #3 - Chukchi West Line	Science	8	41.6	292	
03/12/17 - 03/13/17	Science Flight #4 - North Beaufort Loop Line	Science	8.1	49.7	283.9	
03/14/17 - 03/15/17	Science Flight #5 - East Beaufort Loop Line	Science	8	57.7	275.9	
03/20/17	Science Flight #6 - Sea Ice South Basin Transect (to Thule)	Science	8.1	65.8	267.8	
03/22/17	Science Flight #7 - North Flux 02	Science	7.9	73.7	259.9	
03/23/17	Science Flight #8 - Zig Zag West Line	Science	7.9	81.6	252	
03/24/17	Science Flight #9 - CryoVEx Line	Science	5.8	87.4	246.2	
03/27/17	Science Flight #10 - Northwest Coastal A Line	Science	7.4	94.8	238.8	
03/28/17	Science Flight #11 - North Central Cap 01 Line	Science	7.6	102.4	231.2	
03/29/17	Science Flight #12 - Ellesemere Island 01 Line	Science	7.6	110	223.6	
03/30/17	Science Flight #13 - Ellesemere South Line	Science	7.9	117.9	215.7	
03/31/17	Science Flight #14 - Alexander-Petermann Line	Science	6.5	124.4	209.2	
04/03/17	Science Flight #15 - Zachariae 79N Fram Straight and BGTL ENSB Transit	Science	7.4	131.8	201.8	
04/05/17	Science Flight #16 - Svalbard North Line (High Priority)	Science	7	138.8	194.8	

04/06/17	Science Flight #17- Svalbard South Mission (High Priority)	Science	8.5	147.3	186.3
04/07/17	Science Flight #18- Combined Zig Zag East Mission and Transit ENSB to BGTL	Science	8.3	155.6	178
04/10/17	Science Flight #19- North Central Gap 3	Science	7.8	163.4	170.2
04/11/17	Science Flight #20- CryoVex 2 (High Priority)	Science	7.8	171.2	162.4
04/12/17	Science Flight #21- Northwest Coastal C	Science	7.2	178.4	155.2
04/13/17	Science Flight #22-North Glaciers 02 Prime (High Priority)	Science	8.2	186.6	147
04/14/17	Science Flight #23-IceSat-2 North/CryoSat-2 SARIn	Science	7	193.6	140
04/17/17	Science Flight #24- Humboldt 01(High Priority)	Science	7.8	201.4	132.2
04/19/17	Science Flight #25-Sea Ice - South Canada Basin (MediumPriority)	Science	7.8	209.2	124.4
04/20/17	Transit Flight to Kangerlussuaq	Transit	3	212.2	121.4
04/21/17	Science Flight #26- Southeast Coastal	Science	8	220.2	113.4
04/22/17	Science Flight #27-Helheim- Kangerd	Science	7.8	228	105.6
04/24/17	Science Flight #28-Geikie 01 (High Priority)	Science	8	236	97.6
04/26/17	Science Flight #29-Devon- Bylot (Medium Priority)	Science	7.9	243.9	89.7
04/28/17	Science Flight #30-Penny 01 (Medium Priority)	Science	6	249.9	83.7
04/29/17	Science Flight #31- Thomas - Jakobshavn 01	Science	8.4	258.3	75.3
05/01/17	Science Flight #32- Thomas - Jakobshavn-Eqip- Store	Science	8.4	266.7	66.9
05/02/17	Science Flight #33- Thomas - ICESat-2 Central	Science	7.9	274.6	59
05/03/17	Science Flight #34- Thomas - Southwest Coastal A	Science	8.3	282.9	50.7
05/05/17	Science Flight #35-Helheim- Kangerdlugssuaq Gap B (High Priority)	Science	8.2	291.1	42.5
05/06/17	Science Flight #36-Helheim- K-EGIG-Summit	Science	8	299.1	34.5
05/08/17	Science Flight #37- Southeast Glaciers 01 (High Priority)	Science	8	307.1	26.5
05/10/17	Science Flight #38-Umanaq B (High Priority)	Science	8	315.1	18.5
05/11/17	Science Flight #39-ICESat- 2 South (High Priority)	Science	8.1	323.2	10.4
05/12/17	Science Flight #40-Nuuk Fjords	Science	1.8	325	8.6

05/13/17	Transit Flight to Dover DE (to clear customs)	Transit	6.4	331.4	2.2
05/13/17	Transit Flight to Wallops Flight Facility	Transit	0.6	332	1.6

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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Source URL: https://espo.nasa.gov/oib/science_reports/OIB_-_P-3_Orion_03_29_17_Science_Report#comment-0