

P-3 Orion 04/23/18

Aircraft:

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

Flight Number:

2018 OIB Arctic -Science #14

Payload Configuration:

2018 OIB Arctic

Nav Data Collected:

No

Total Flight Time:

8.2 hours

Submitted by:

Janet Letchworth on 04/23/18

Flight Segments:

From:	BGSF	To:	BGSF
Start:	04/23/18 12:34 Z	Finish:	04/23/18 20:47 Z
Flight Time:	8.2 hours		
Log Number:	18P008	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	This mission flew the East Glaciers 1 line - a medium priority line that was the best option given the weather forecast.		

Flight Hour Summary:

	18P008
Flight Hours Approved in SOFRS	201.2
Total Used	190.4
Total Remaining	10.8

18P008 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/13/18	2018 OIB Arctic - Airworthiness Test Flight	Other	0.8	0.8	200.4	
03/14/18	2018 OIB Arctic -Project Test Flight - Laser	Other	2.6	3.4	197.8	
03/15/18	2018 OIB Arctic -Project Test Flight - Radar	Other	5.7	9.1	192.1	
03/18/18	2018 OIB Arctic -delta ATF	Other	0.8	9.9	191.3	
03/20/18	2018 OIB Arctic -Transit to Thule	Transit	7.9	17.8	183.4	
03/22/18	2018 OIB Arctic - Science #1	Science	7.8	25.6	175.6	
04/03/18	2018 OIB Arctic - Science #2	Science	7.9	33.5	167.7	
04/04/18	2018 OIB Arctic - Science #3	Science	8.1	41.6	159.6	
04/05/18	2018 OIB Arctic - Science #4	Science	8	49.6	151.6	
04/06/18	2018 OIB Arctic - Science #5	Science	8.8	58.4	142.8	
04/07/18 - 04/08/18	2018 OIB Arctic - Science #6	Science	8.1	66.5	134.7	
04/08/18 - 04/09/18	2018 OIB Arctic - Science #7	Science	8.3	74.8	126.4	

04/14/18 - 04/15/18	2018 OIB Arctic - Science #8	Science	7.7	82.5	118.7
04/16/18	2018 OIB Arctic - Science #9	Science	8.2	90.7	110.5
04/18/18	2018 OIB Arctic - Science #10	Science	8	98.7	102.5
04/19/18	2018 OIB Arctic - Science #11	Science	7.7	106.4	94.8
04/20/18	2018 OIB Arctic -Transit to Kanger	Transit	4.2	110.6	90.6
04/21/18	2018 OIB Arctic - Science #12	Science	8.1	118.7	82.5
04/22/18	2018 OIB Arctic - Science #13	Science	6.5	125.2	76
04/23/18	2018 OIB Arctic - Science #14	Science	8.2	133.4	67.8
04/25/18	2018 OIB Arctic - Science #15	Science	7.7	141.1	60.1
04/26/18	2018 OIB Arctic - Science #16	Science	8.8	149.9	51.3
04/27/18	2018 OIB Arctic - Science #17	Science	8	157.9	43.3
04/29/18	2018 OIB Arctic - Science #18	Science	8.3	166.2	35
04/30/18	2018 OIB Arctic - Science #19	Science	9.3	175.5	25.7
05/01/18	2018 OIB Arctic - Science #20	Science	7.4	182.9	18.3
05/03/18	2018 OIB Arctic -Return Transit Leg #1	Transit	6.4	189.3	11.9
05/03/18	2018 OIB Arctic -Return Transit Leg #2	Transit	0.6	189.9	11.3
05/03/18	2018 OIB Arctic -Return Transit Leg #3	Transit	0.5	190.4	10.8

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.

Related Science Report:

OIB - P-3 Orion 04/23/18 Science Report

Mission:

OIB

Mission Summary:

Mission: East Glaciers 01
Priority: Medium

This mission maps the centerlines of several glaciers on the central east coast of Greenland. This particular draft captures the centerlines of six glaciers: DeGeer, Jaette, Nordenskiold, Wahlenberg, Violin and Nord Glaciers. The first two were originally flown during the 2009 OIB campaign, and all were flown in 2012. The Violin centerline passes within 1 km of two PROMICE sites. We transit to the area along a line connecting the DYE2 and GRIP drill sites, and return along a historical ATM line dating to 1993. We also overfly the ICESat 0412 Summit calibration line, plus two new ICESat-2 lines at Summit.

A challenging cloud base and forecast meant for an unexpected mission selection today, which had the most improving forecast. Intermittent clouds were encountered during the survey across the ice sheet toward the east coast, causing intermittent laser altimetry loss. Little turbulence was encountered during the mission. At the end of the third loop, rather than repeating a survey of the south fork of Hamberg Glacier done just a few minutes

prior, we flew over its northern fork, which is likely previously unsurveyed. Despite the relatively nearby passes to Summit, we did not observe the camp outside through several ICESat-2 lines, but eventually did spot it at nadir, and altimetry collection was intermittent west of the divide on our return leg and over DYE-2/Raven. All instruments performed well. We conducted a 3000-ft ramp pass. Several members of the NSF Firn2018 traverse joined this mission.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. Icefall over a probable bedrock step directly below a cleft in the valley wall (Joe MacGregor / NASA)
3. Ice rubble remnant from a catastrophic ice-marginal lake drainage, in mountain shadow (Joe MacGregor / NASA)
4. Terminus of Jættegletsjer (Joe MacGregor / NASA)
5. Steep bank of a dry supraglacial stream on Hamberg Glacier (Joe MacGregor / NASA)

Images:

Map of today's mission



[Read more](#)

Icefall over a probable bedrock step directly below a cleft in the



[Read more](#)

Ice rubble remnant from a catastrophic ice-marginal lake drainage,



[Read more](#)

Terminus of Jættegletsjer



[Read more](#)

Steep bank of a dry supraglacial stream on Hamberg Glacier



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Submitted by:

Joseph MacGregor on 04/24/18

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Page Editor: Brad Bulger

NASA Official: Marilyn Vasques

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