

P-3 Orion 05/01/18

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

Flight Number: 2018 OIB Arctic -Science #20

Payload Configuration: 2018 OIB Arctic

Nav Data Collected: No

Total Flight Time: 7.4 hours

Submitted by: Janet Letchworth on 05/01/18

Flight Segments:

From:	BGSF	To:	BGSF
Start:	05/01/18 11:22 Z	Finish:	05/01/18 18:47 Z
Flight Time:	7.4 hours		
Log Number:	18P008	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	This flight covered K-EGIG-Summit Flight line.		

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 05/01/18 Science Report

Mission: OIB

Mission Summary:

Mission K-EGIG-Summit
Priority: Baseline

This mission was designed to accomplish a number of high-priority tasks. First, we re-fly the van den Broeke "K-Transect" in the Russell Glacier catchment, consisting of several sites where comprehensive glaciological measurements are collected annually. We also fly the EGIG traverse line. We overfly the ICESat-1 track 412 Summit calibration site, and we fly two ICESat-2 ground tracks in the same area near Summit, with the expectation that these will become regular calibration sites as well. For 2016, we added an overflight of a GreenTrACS core near IceSat track 0055. Finally we extend the coverage of the Jakobshavn basin upstream along ICESat-1 tracks, to capture continued inland progression of thinning there.

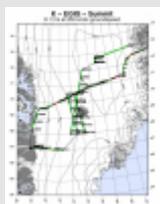
A middling forecast for Greenland as a whole but a decent forecast for this mission made for an easy choice, especially given that we had already surveyed some of the portions that were likely to be clouded over. We broke out of the clouds about halfway up the K-transect, but it was mostly clear throughout the ICESat lines, including those over Summit. By coincidence, we were able to observe an LC-130 taking off from Summit as we were conducting our final pass. Clouds east of Summit caused significant altimetry loss and we turned around early to rejoin the EGIG line where clouds dissipated. We hosted two visitors from Kangerlussuaq airport operations. All instruments performed well. Altimetry coverage was about 85%. We performed a low ramp pass at 1200 ft.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. LC-130 warming up engines at the recently reopened Summit, central Greenland (John Sonntag / NASA)
3. LC-130 heading west of Kangerlussuaq shortly after take-off from Summit, with P-3's #4 (rightmost) propeller and engine nacelle in foreground (John Sonntag / NASA)
4. Pressure ridges in a fjord's sea ice clearly delineate the zone of influence of calving from a small outlet glacier south of Jakobshavn Isbræ (Joe MacGregor / NASA)

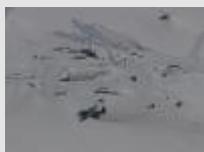
Images:

Map of today's mission



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LC-130 warming up engines at the recently reopened Summit,



[Read more](#)

LC-130 heading west of Kangerlussuaq shortly after take-off from



[Read more](#)

Pressure ridges in a fjord's sea ice clearly delineate the zone of



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Submitted by: Joseph MacGregor on 05/02/18

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