

P-3 Orion 04/30/18

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

Flight Number: 2018 OIB Arctic -Science #19

Payload Configuration: 2018 OIB Arctic

Nav Data Collected: No

Total Flight Time: 9.3 hours

Submitted by: Janet Letchworth on 04/30/18

Flight Segments:

From:	BGSF	To:	BGSF
Start:	04/30/18 10:42 Z	Finish:	04/30/18 20:00 Z
Flight Time:	9.3 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 the Thomas-Jakobshavn 01 line - a baseline mission on this campaign.		

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 04/30/18 Science Report

Mission: OIB

Mission Summary:

Mission: Thomas-Jakobshavn 01

Priority: Baseline

This is a repeat of 2009, 2010, 2011, 2012, 2013 and 2014 IceBridge missions. Its purpose is to re- survey the highest-priority lines of the historical ATM 10-km Jakobshavn grid, the main flowline of Jakobshavn. It also extends that grid with a broader array of ICESat ground tracks over the larger Jakobshavn basin. Renamed in 2015 in honor of Robert H. Thomas.

A promising forecast for this mission, with outflow across the Ilulissat region, made for an easy choice today. Because of the less promising forecast for this region later in the week, we opted to fly a longer mission that included two additional ICESat lines upstream of the main set flown today. We flew along the fjord west of Kangerlussuaq for an additional couple of minutes to repeat the snow radar calibration performed yesterday. We were greeted with clear skies across Jakobshavn Isbræ, where we surveyed numerous ATM and ICESat lines, along with the central flowline. No significant clouds were encountered, and laser altimetry surveying was good all day. We spotted a couple of piles of rubble that we suspected to be due to drained subglacial lakes. We passed by a snow-covered Swiss Camp. No instrument issues were reported, and altimetry coverage was

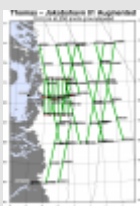
100%. A ramp pass at 2000 ft was performed.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. Snow-filled crevasses near Jakobshavn Isbræ, under P-3 shadow (Joe MacGregor / NASA)
3. The complex southern shear margin of Jakobshavn Isbræ, with an ambiguous grounded-to-floating transition (Joe MacGregor / NASA)
4. The ice prow that separates the main trunk of Jakobshavn Isbræ from the now-stagnant outlet glacier to the north, also demarcating the iceberg supply (Joe MacGregor / NASA)
5. Ice rubble possibly due to drainage of a subglacial lake (Joe MacGregor / NASA)
6. Iceberg in Ilulissat fjord (Joe MacGregor / NASA)
7. Snow-filled bedrock lineations (Joe MacGregor / NASA)
8. Snaking sastrugi (Joe MacGregor / NASA)

Images:

Map of today's mission



[Read more](#)

Snow-filled crevasses near Jakobshavn Isbræ, under P-3 shadow



[Read more](#)

The complex southern shear margin of Jakobshavn Isbræ, with an



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The ice prow that separates the main trunk of Jakobshavn Isbræ



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Ice rubble possibly due to drainage of a subglacial lake



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Iceberg in Ilulissat fjord



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Snow-filled bedrock lineations



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Snaking sastrugi



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Submitted by: Joseph MacGregor on 04/30/18

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