

## P-3 Orion - WFF 05/06/19

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

Flight Number: 2019 OIB Science Flight #17

Payload Configuration: Operation IceBridge

Nav Data Collected: No

Total Flight Time: 8.4 hours

Submitted by: Mike Cropper on 05/06/19

### Flight Segments:

<b>From:</b>	BGSF	<b>To:</b>	BGSF
<b>Start:</b>	05/06/19 08:30 Z	<b>Finish:</b>	05/06/19 16:55 Z
<b>Flight Time:</b>	8.4 hours		
<b>Log Number:</b>	<a href="#">19P017</a>	<b>PI:</b>	Joseph MacGregor
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		

### Flight Hour Summary:

	19P017
<b>Flight Hours Approved in SOFRS</b>	250
<b>Total Used</b>	216.3
<b>Total Remaining</b>	33.7

### 19P017 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">03/26/19</a>	#2053: 2019 OIB ATF	Check	0.9	0.9	249.1	0
<a href="#">03/27/19</a>	#2059: 2019 OIB PTF-Laser	Check	2.3	3.2	246.8	0
<a href="#">03/28/19</a>	#2061: 2019 OIB PTF-Radar	Check	3.2	6.4	243.6	0
<a href="#">04/01/19</a>	#2068: 2019 OIB WFF-BGTL Transit Flight	Transit	6.9	13.3	236.7	2458
<a href="#">04/03/19</a>	#2070: 2019 OIB Science Flight #1	Science	7.6	20.9	229.1	1938
<a href="#">04/05/19</a>	#2072: 2019 OIB Science Flight #2	Science	7.7	28.6	221.4	1910
<a href="#">04/06/19</a>	#2073: 2019 OIB Science Flight #3	Science	7.2	35.8	214.2	2000
<a href="#">04/08/19</a>	#2075: 2019 OIB Science Flight #4	Science	6.9	42.7	207.3	1780
<a href="#">04/09/19</a>	#2076: 2019 OIB Science Flight #5	Science	7.8	50.5	199.5	2045
<a href="#">04/10/19</a>	#2081: 2019 OIB Science Flight #6	Science	10.1	60.6	189.4	2702
<a href="#">04/11/19</a>	#2082: BGSF-BGTL Transit	Transit	2.2	62.8	187.2	696
<a href="#">04/12/19</a>	#2083: 2019 OIB Science Flight #7	Science	7.2	70	180	2109
<a href="#">04/15/19</a>	#2086: 2019 OIB Science Flight #8	Science	4.8	74.8	175.2	1243
<a href="#">04/16/19</a>	#2087: 2019 OIB Science Flight #9	Science	7.6	82.4	167.6	2036
<a href="#">04/17/19</a>	#2088: 2019 OIB Science Flight #10	Science	7.7	90.1	159.9	1937

<a href="#">04/18/19</a>	#2090: 2019 OIB Science Flight #11	Science	7.8	97.9	152.1	2008
<a href="#">04/19/19</a>	#2091: 2019 OIB Science Flight #12	Science	7.6	105.5	144.5	2104
<a href="#">04/20/19</a>	#2092: 2019 OIB Science Flight #13	Science	6.9	112.4	137.6	0
<a href="#">04/22/19</a>	#2094: 2019 OIB Science Flight #14	Science	6.6	119	131	1867
<a href="#">04/23/19</a>	#2099: 2019 OIB Science Flight #15	Science	7.7	126.7	123.3	1979
<a href="#">04/25/19</a>	#2102: 2019 OIB BGTL-KBGR Transit Flight	Transit	6.2	132.9	117.1	0
<a href="#">04/26/19</a>	KBGR to BGSGF Transit	Transit	5.7	138.6	111.4	0
<a href="#">05/05/19</a>	2019 OIB Science Flight #16	Science	7.8	146.4	103.6	0
<a href="#">05/06/19</a>	2019 OIB Science Flight #17	Science	8.4	154.8	95.2	0
<a href="#">05/07/19</a>	2019 OIB Science Flight #18	Science	8.5	163.3	86.7	0
<a href="#">05/08/19</a>	2019 OIB Science Flight #19	Science	8	171.3	78.7	0
<a href="#">05/12/19</a>	2019 OIB Science Flight #20	Science	9	180.3	69.7	0
<a href="#">05/13/19</a>	2019 OIB Science Flight #21	Science	7	187.3	62.7	0
<a href="#">05/14/19</a>	2019 OIB Science Flight #22	Science	7.9	195.2	54.8	0
<a href="#">05/15/19</a>	2019 OIB Science Flight #23	Science	8.3	203.5	46.5	0
<a href="#">05/16/19</a>	2019 OIB Science Flight #24	Science	6.3	209.8	40.2	0
<a href="#">05/17/19</a>	2019 OIB Transit	Transit	6.2	216	34	0
<a href="#">05/17/19</a>	2019 OIB Transit	Transit	0.3	216.3	33.7	0

*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 - WFF 05/06/19 Science Report

**Mission:** OIB

**Mission Summary:**

Mission: Thomas – Jakobshavn 01  
Priority: Baseline

This baseline mission was last flown in 2018 and surveys two ICESat-2 tracks of varying time latency. This flight combines historical ATM focused grid (approximately 100 km N-S and 75 km E-W) and flowline surveys (collected as far back as 1997), ICESat legacy tracks, and two ICESat-2 tracks. The latter are new this year, replacing two ICESat tracks. One of the IS-2 tracks was swapped (see notes below) to minimize the timing between OIB and IS-2 data collection.

On our transit to today's target, the P-3 was filmed by the BBC from a chartered Air Greenland helicopter over the ice sheet. Shortly thereafter, we made it to the science target where we slowly "mowed the lawn" from the interior to the calving front of Jakobshavn Isbrae. Many exposed, frozen supraglacial lakes were visible in the upper reaches. As we made our way closer to the fjord, ponding of surface meltwater became more and more

frequent to the point where several supraglacial lakes were observed.

Conditions were ideal: early we encountered scattered and thin high clouds above us, and near clear-sky conditions later in the day. The flight was largely smooth with isolated bouts of turbulence over the main trunk of Jakobshavn. Thus, data collection was excellent. We performed a ramp pass at 1200' prior to landing. Headwall SWIR was unable to be operated today, but otherwise all instruments worked well. ATM estimates 100% altimetry data recovery.

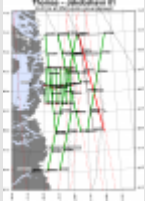
ICESat-2 Tracks (+/- indicates OIB surveyed after/before ICESat-2)

0338, + 16 days

0597, - 15 hours

Images:

## Map of today's mission



[Read more](#)

## The P-3 flies by the Air Greenland helicopter that has the BBC



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## 3. CAMBOT image of the Jakobshavn Isbrae calving front (roughly



[Read more](#)

## 4. A view looking up-fjord towards the steep cliff face of the



[Read more](#)

## Meltwater and debris along the edge of Eqip Sermia



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## A supraglacial lake forms in a depression behind jagged ice towers



[Read more](#)

## 7. A large river forms at the edge of the Issunguata Sermia lobe, fed



[Read more](#)

**Submitted by:** Brooke Medley on 05/23/19

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