

P-3 Orion - WFF 05/05/19

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

Flight Number: 2019 OIB Science Flight #16

Payload Configuration: Operation IceBridge

Nav Data Collected: No

Total Flight Time: 7.8 hours

Submitted by: Mike Cropper on 05/06/19

Flight Segments:

From:	BGSF	To:	BGSF
Start:	05/05/19 09:10 Z	Finish:	05/05/19 17:00 Z
Flight Time:	7.8 hours		
Log Number:	19P017	PI:	Joseph MacGregor
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		

Flight Hour Summary:

	19P017
Flight Hours Approved in SOFRS	250
Total Used	216.3
Total Remaining	33.7

19P017 Flight Reports

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

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

Mission: OIB

Mission Summary:

Mission: ICESat-2 Central
Priority: Baseline

This baseline mission was last flown in 2017 and surveys nine ICESat-2 tracks of varying time latency. Specifically, the flight captures several different snow and ice surface conditions as well as many IS-2 crossovers. Two of the IS-2 tracks were replaced (see notes below) to minimize the timing between OIB and IS-2 data collection. We also note the tracks where surface ponding was visible. The mission also flies over the sites of several shallow ice cores that were collected by the GreenTrACS project.

This science mission begins only a short distance from Kangerlussuaq, and we were immediately stunned by the number and size of melt ponds littering the ice-sheet surface. April temperatures in Greenland have been excessively high, leading to very early onset into the melt season. The melt ponds stole the show on an otherwise near featureless flight. As anticipated, the plane encountered frequent bouts of turbulence closer to

the ice-sheet edge, which gradually reduced in duration as we migrated inland.

Throughout the flight we were largely under high clouds although portions of clear sky or even patchy low clouds were encountered as well. Thus, data collection was excellent. We performed a ramp pass at 2500' prior to landing. Headwall SWIR was unable to be operated today, but otherwise all instruments worked well. ATM estimates XX% altimetry data recovery.

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

0224, +23 days (surface ponding)

1108, -35 days (surface ponding)

0605, -2 days (substitute)

0041, +35 days

0422, +10 days

1245, + 47 days or - 44 days

0239, +22 days

1169, -39 days (surface ponding)

0620, - 3 days (substitute)

Images:

Map of today's mission



[Read more](#)

Highly crevasses section of Russell Glacier with regions of exposed



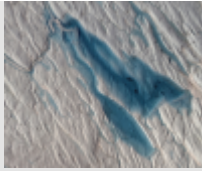
[Read more](#)

A look back towards the fjord where ice bends and breaks as it



[Read more](#)

A CAMBOT mosaic of a melt pond with surface rippling



[Read more](#)

Spectacularly sinuous and deep blue melt ponds form after days of



[Read more](#)

Emerald green ponds weave around ice and debris near the



[Read more](#)

Submitted by: Brooke Medley on 05/23/19

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