

## OIB - P-3 Orion - WFF 04/18/19 Science Report

### Aircraft:

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

### Date:

Thursday, April 18, 2019

### Mission:

OIB

### Mission Location:

Northeast Glaciers 02

### Mission Summary:

Mission: Northeast Glaciers 02

Priority: Medium

This mission reoccupies the centerlines of the Storstrømmen and L Bistrup Bræ glaciers, as well as an extension of the Northeast Greenland Ice Stream from Zachariæ Isstrøm and 79N Glaciers into the main ice sheet. This southward extension along the ice stream reflects the 2 May 2007 lines, and extends them 60 km farther up the trunk of the ice stream. We transit to and from the northeast region along a historical ATM line dating back to 1994, and along a Danish ground traverse route connecting NEEM and EGRIP core sites. Measurements collected during the ground traverse may permit enhanced interpretation of shallow radar data from OIB. For 2018, we conduct crossing passes over a subglacial site of interest, at the request of Jon Bamber.

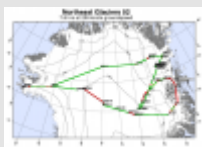
A poor forecast for target regions in the Arctic Ocean and the northwest coast brought us again to northeast Greenland. We again conducted a ramp pass after take-off at 1,200 ft AGL. We encountered low clouds for the first 150 km or so, as expected, but then broke out into haze prior to reaching Camp Century. The survey continued through NEEM and EGRIP. We encountered ground fog in the lower reaches of L. Bistrup Bræ and Storstrømmen, which had not cleared out quite as much as we had expected. We could however faintly observe the odd rift that appears to lie near the collision between the two glaciers. After that, the skies cleared and the mission proceeded uneventfully. Clouds returned around Camp Century and we gained elevation to stay out of them, with intermittent returns to survey altitude. Headwall again required a restart. Otherwise, all instruments performed well and ATM estimates 95% altimetry recovery. We again performed two ramp passes at 1,600 and 1,200 ft AGL prior to landing at Thule AB.

### Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. CAMBOT image of EGRIP dome structure (Jeremy Harbeck / NASA)
3. Hazy view of the rift between floating ice at the downstream ends of L. Bistrup Bræ (left) and Storstrømmen (right) (Jeremy Harbeck / NASA)
4. CAMBOT image of frozen supraglacial lake on Storstrømmen with a possible moulin on the right side (Jeremy Harbeck / NASA)
5. Large snow-filled crevasse field on Zachariæ Isstrøm with P-3 shadow (Jeremy Harbeck / NASA)
6. Drifted-over arcuate crevasses on Zachariæ Isstrøm (Joe MacGregor / NASA)

### Images:

#### Map of today's mission



[Read more](#)

#### CAMBOT image of EGRIP dome structure



[Read more](#)

#### Hazy view of the rift between floating ice at the downstream ends of L. Bistrup Bræ (left) and Storstrømmen (right)



[Read more](#)

## CAMBOT image of frozen supraglacial lake on Storstrømmen with a



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## Large snow-filled crevasse field on Zachariae Isstrøm with P-3 shadow



[Read more](#)

## Drifted-over arcuate crevasses on Zachariae Isstrøm



[Read more](#)

### Submitted by:

Joseph MacGregor on 04/18/19

### Related Flight Report:

## P-3 Orion - WFF 04/19/19

### Flight Number:

#2091: 2019 OIB Science Flight #12

### Payload Configuration:

Operation IceBridge

### Nav Data Collected:

No

### Total Flight Time:

7.6 hours

### Submitted by:

Kelly Griffin on 04/22/19

### Flight Segments:

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	04/19/19 10:50 Z	<b>Finish:</b>	04/19/19 18:28 Z

<b>Flight Time:</b>	7.6 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		
<b>Miles Flown:</b>	2104 miles		

**Flight Hour Summary:**

	<b>19P017</b>
<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 BGSF 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.*

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Page Editor: Brad Bulger

NASA Official: Marilyn Vasques

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