

P-3 Orion 05/05/14

Aircraft:

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

Flight Number:

Science Flight - IceSat 2 - North

Payload Configuration:

Operation IceBridge

Nav Data Collected:

Yes

Total Flight Time:

8 hours

Submitted by:

Luci Crittenden on 05/05/14

Flight Segments:

| | | | |
|---------------------------|--|----------------|-------------------|
| From: | BGTL | To: | BGTL |
| Start: | 05/05/14 10:50 Z | Finish: | 05/05/14 18:50 Z |
| Flight Time: | 8 hours | | |
| Log Number: | 14P008 | PI: | Michael Studinger |
| Funding Source: | Bruce Tagg - NASA - SMD - ESD Airborne Science Program | | |
| Purpose of Flight: | Science | | |
| Comments: | IceSat 2 North mission completed by OIB today. | | |

Flight Hour Summary:

| | |
|---------------------------------------|---------------|
| | 14P008 |
| Flight Hours Approved in SOFRS | 369 |
| Total Used | 354.1 |
| Total Remaining | 14.9 |

14P008 Flight Reports

| Date | Flt # | Purpose of Flight | Duration | Running Total | Hours Remaining | Miles Flown |
|-------------------------------------|---|-------------------|----------|---------------|-----------------|-------------|
| 03/06/14 | 1767 | Check | 1.3 | 1.3 | 367.7 | |
| 03/06/14 | 1768 | Check | 2.7 | 4 | 365 | |
| 03/07/14 | 1769 | Check | 5.7 | 9.7 | 359.3 | |
| 03/10/14 | WFF to Thule Transit | Transit | 8.1 | 17.8 | 351.2 | |
| 03/12/14 | Sea Ice - Nansen Gap | Science | 7.6 | 25.4 | 343.6 | |
| 03/13/14 | Sea Ice - Zig Zag East | Science | 7.7 | 33.1 | 335.9 | |
| 03/14/14 | Thule - Fairbanks Transit: Sea Ice - Laxon Line | Science | 8.8 | 41.9 | 327.1 | |
| 03/15/14 - 03/16/14 | Sea Ice - SIZRS ZigZag | Science | 8.1 | 50 | 319 | |
| 03/17/14 - 03/18/14 | Sea Ice - North Beaufort Loop - with Barrow | Science | 8.2 | 58.2 | 310.8 | |
| 03/18/14 - 03/19/14 | F06 Sea Ice - East Beaufort - with ONR/MIZ/CryoVEx camp | Science | 8.2 | 66.4 | 302.6 | |
| 03/19/14 - 03/20/14 | F07 Sea Ice - Beaufort - Chukchi Diamond | Science | 8.3 | 74.7 | 294.3 | |
| 03/21/14 | F08: Sea Ice ? South Basin Transect | Science | 8.5 | 83.2 | 285.8 | |
| 03/24/14 | F09: Sea Ice ? Giles Gateway | Science | 8 | 91.2 | 277.8 | |
| 03/25/14 | F10 - Axel Heiberg-Eureka | Science | 3 | 94.2 | 274.8 | |
| 03/26/14 | F11 - Zigzag West | Science | 7.9 | 102.1 | 266.9 | |
| 03/28/14 | Sea Ice ? South Canada Basin | Science | 7 | 109.1 | 259.9 | |
| 03/31/14 | F13 Sea Ice ? CryoVEx Nord | Science | 7.3 | 116.4 | 252.6 | |

| | | | | | |
|--------------------------|--|---------|-----|-------|-------|
| 04/03/14 | F15 Sea Ice - North Canada Basin | Science | 8.2 | 124.6 | 244.4 |
| 04/04/14 | Transit from Thule to Kangerlussuaq | Transit | 2.8 | 127.4 | 241.6 |
| 04/05/14 | Science Flight #16 - East Glaciers | Science | 7.8 | 135.2 | 233.8 |
| 04/07/14 | Science Flight - Southwest Coastal A | Science | 7.7 | 142.9 | 226.1 |
| 04/08/14 | Science Flight - Southeast Glacier 01 | Science | 7.6 | 150.5 | 218.5 |
| 04/09/14 | Science Flight - Jakobshaven Glacier 01 | Science | 8 | 158.5 | 210.5 |
| 04/10/14 | Science Flight - K-EGIG Summit Mission | Science | 7.9 | 166.4 | 202.6 |
| 04/12/14 | Science Flight - OSU Clusters | Science | 6.6 | 173 | 196 |
| 04/14/14 | Science Flight - Jakobshavn-Eqip-Store | Science | 7.7 | 180.7 | 188.3 |
| 04/15/14 | Science Flight - Southwest Glacier 01 | Science | 7.3 | 188 | 181 |
| 04/16/14 | Science Flight - IceSat 2 Central | Science | 8.4 | 196.4 | 172.6 |
| 04/19/14 | Science Flight - Jakobshaven 02 | Science | 6.4 | 202.8 | 166.2 |
| 04/21/14 | Science Flight - Geikie Glacier 01 | Science | 8.6 | 211.4 | 157.6 |
| 04/23/14 | Science Flight - Baffin 02 | Science | 6 | 217.4 | 151.6 |
| 04/24/14 | Science Flight - Helheim-Kangerd | Science | 8.2 | 225.6 | 143.4 |
| 04/25/14 | Transit Flight - Kangerlussuaq to Thule | Transit | 2.6 | 228.2 | 140.8 |
| 04/26/14 | Science Flight - NW Glacier 02 Mop-Up | Science | 5.6 | 233.8 | 135.2 |
| 04/28/14 | Science Flight - North Pole Transect | Science | 7.3 | 241.1 | 127.9 |
| 04/29/14 | Science Flight - Northeast Glaciers 01 | Science | 7.8 | 248.9 | 120.1 |
| 04/30/14 | Science Flight - Northeast Grid 01 | Science | 2.6 | 251.5 | 117.5 |
| 05/01/14 | Science Flight - Humboldt 01 | Science | 5.5 | 257 | 112 |
| 05/02/14 | Science Flight - Cryosat Land | Science | 7 | 264 | 105 |
| 05/05/14 | Science Flight - IceSat 2 - North | Science | 8 | 272 | 97 |
| 05/07/14 | Science Flight - NW Glaciers 01 | Science | 8 | 280 | 89 |
| 05/08/14 | Science Flight - North Central Gap 01 | Science | 8 | 288 | 81 |
| 05/09/14 | Science Flight - NW Coastal B | Science | 6.9 | 294.9 | 74.1 |
| 05/12/14 | Science Flight - Alexander-Petermann 01 | Science | 7 | 301.9 | 67.1 |
| 05/14/14 | Science Flight - Northeast Grid 01 | Science | 7.7 | 309.6 | 59.4 |
| 05/15/14 | Science Flight - Northeast Grid 06 | Science | 8 | 317.6 | 51.4 |
| 05/16/14 | Science Flight - NW Coastal C | Science | 6.1 | 323.7 | 45.3 |
| 05/19/14 | Science Flight - North Glaciers 02 Prime | Science | 8 | 331.7 | 37.3 |
| 05/20/14 | Science Flight - Northwest Mopup | Science | 6.5 | 338.2 | 30.8 |

| | | | | | |
|--------------------------|------------------------------------|---------|-----|-------|------|
| 05/21/14 | Science Flight - Northeast Grid 04 | Science | 7.9 | 346.1 | 22.9 |
| 05/23/14 | Transit Flight - Thule to Wallops | Transit | 7.5 | 353.6 | 15.4 |
| 05/23/14 | Transit Flight - Thule to Wallops | Transit | 0.5 | 354.1 | 14.9 |

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 05/05/14 Science Report

Mission:

OIB

Mission Summary:

F35 ICESat-2 North

Accomplishments

- Low-altitude survey (1,500 ft AGL) over the Greenland Ice Sheet.
- ATM, albedo, KT-19, snow, Ku-band, accumulation, MCoRDS and DMS were operated on the survey lines.
- Satellite tracks: ICESat-2: 0484, 1246, 0621, 0057, 0880, 0316
- Repeat Mission: new mission.

| Instrument | Operated | Data Volume | Instrument Issues/Comments |
|--------------------|----------|-------------|----------------------------|
| ATM | yes | 80 GB | None. |
| DMS | yes | 120 GB | None. |
| Snow Radar | yes | 240 GB | None. |
| Ku-band Radar | yes | 240 GB | None. |
| Accumulation Radar | yes | 156 GB | None. |
| MCoRDS | yes | 2.0 TB | None. |
| KT-19 | yes | 10 MB | None. |
| Albedo | yes | 6 GB | None. |

Mission Report (Michael Studinger, Mission Scientist)

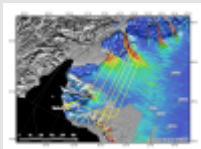
Today's mission was designed to overfly planned ICESat-2 ground tracks over a wide range of ice regimes near Thule. We centered some of the flight lines on each of three beam pairs (left, nadir and right) in turn, sampling at least one of each beam pair during this mission. The east-west crossing line was designed to capture as many ascending/descending crossovers as possible. We also flew a particular flowline of Petermann Glacier which has been sampled intermittently during the ATM and IceBridge eras, overflying two GCNet sites in the process. Finally we flew over two core sites near Thule, known as ?Barrels? and ?North Ice Cap?.

Today's mission was the last remaining "baseline" mission for this campaign. Baseline missions have the highest land ice priority and need to be surveyed every year.

LiDAR data collection started 05/05/2014 11:08 UTC and ended at 18:28 UTC. In total we collected 7.3 hours of science data.

Images:

Figure 1: Today's trajectory in yellow.



[Read more](#)

Submitted by:

Michael Studinger on 05/05/14

Page Last Updated: April 22, 2017

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Source URL: https://espoarchive.nasa.gov/flight_reports/P-3_Orion_05_05_14