P-3 Orion 05/06/17

Aircraft: P-3 Orion - WFF (See full schedule)
Flight Number: Science Flight #36-Helheim-K-EGIG-Summit
Payload Configuration: OIB Arctic
Nav Data Collected: No
Total Flight Time: 8 hours
Submitted by: Cate Easmunt on 05/06/17
Flight Segments:

From:	BGSF	**To:**	BGSF
Start:	05/06/17 10:13 Z	**Finish:**	05/06/17 18:15 Z
Flight Time:	8 hours		
Log Number:	17P006	**PI:**	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		

Flight Hour Summary:

	17P006
Flight Hours Approved in SOFRS	333.6
Total Used	332
Total Remaining	1.6

17P006 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
02/24/17	Airworthiness Test Flight	Check	1	1	332.6	
02/26/17	Project Test Flight #1	Check	4.9	5.9	327.7	
02/27/17	Project Test Flight #2	Check	3	8.9	324.7	
03/07/17	Transit Flight	Transit	8.2	17.1	316.5	
03/09/17	Science Flight #1 - North Pole Transect	Science	8	25.1	308.5	
03/10/17	Science Flight #2 - Laxon Line	Science	8.5	33.6	300	
03/11/17 - 03/12/17	Science Flight #3 - Chukchi West Line	Science	8	41.6	292	
03/12/17 - 03/13/17	Science Flight #4 - North Beaufort Loop Line	Science	8.1	49.7	283.9	
03/14/17 - 03/15/17	Science Flight #5 - East Beaufort Loop Line	Science	8	57.7	275.9	
03/20/17	Science Flight #6 - Sea Ice South Basin Transect (to Thule)	Science	8.1	65.8	267.8	
03/22/17	Science Flight #7 - North Flux 02	Science	7.9	73.7	259.9	
03/23/17	Science Flight #8 - Zig Zag West Line	Science	7.9	81.6	252	
03/24/17	Science Flight #9 - CryoVEx Line	Science	5.8	87.4	246.2	
03/27/17	Science Flight #10 - Northwest Coastal A Line	Science	7.4	94.8	238.8	
03/28/17	Science Flight #11 - North Central Cap 01 Line	Science	7.6	102.4	231.2	
03/29/17	Science Flight #12 - Ellesemere Island 01 Line	Science	7.6	110	223.6	
03/30/17	Science Flight #13 - Ellesemere South Line	Science	7.9	117.9	215.7	
03/31/17	Science Flight #14- Alexander-Petermann Line	Science	6.5	124.4	209.2	

04/03/17	Science Flight #15- Zachariae 79N Fram Straight and BGTL ENSB Transit	Science	7.4	131.8	201.8
04/05/17	Science Flight #16 - Svalbard North Line (High Priority)	Science	7	138.8	194.8
04/06/17	Science Flight #17- Svalbard South Mission (High Priority)	Science	8.5	147.3	186.3
04/07/17	Science Flight #18- Combined Zig Zag East Mission and Transit ENSB to BGTL	Science	8.3	155.6	178
04/10/17	Science Flight #19- North Central Gap 3	Science	7.8	163.4	170.2
04/11/17	Science Flight #20- CryoVex 2 (High Priority)	Science	7.8	171.2	162.4
04/12/17	Science Flight #21-Northwest Coastal C	Science	7.2	178.4	155.2
04/13/17	Science Flight #22-North Glaciers 02 Prime (High Priority)	Science	8.2	186.6	147
04/14/17	Science Flight #23-IceSat-2 North/CryoSat-2 SARIn	Science	7	193.6	140
04/17/17	Science Flight #24-Humboldt 01(High Priority)	Science	7.8	201.4	132.2
04/19/17	Science Flight #25-Sea Ice - South Canada Basin (MediumPriority)	Science	7.8	209.2	124.4
04/20/17	Transit Flight to Kangerlussuaq	Transit	3	212.2	121.4
04/21/17	Science Flight #26-Southeast Coastal	Science	8	220.2	113.4
04/22/17	Science Flight #27-Helheim-Kangerd	Science	7.8	228	105.6
04/24/17	Science Flight #28-Geikie 01 (High Priority)	Science	8	236	97.6
04/26/17	Science Flight #29-Devon-Bylot (Medium Priority)	Science	7.9	243.9	89.7
04/28/17	Science Flight #30-Penny 01 (Medium Priority)	Science	6	249.9	83.7
04/29/17	Science Flight #31-Thomas - Jakobshavn 01	Science	8.4	258.3	75.3
05/01/17	Science Flight #32-Thomas - Jakobshavn-Eqip-Store	Science	8.4	266.7	66.9
05/02/17	Science Flight #33-Thomas - ICESat-2 Central	Science	7.9	274.6	59
05/03/17	Science Flight #34-Thomas - Southwest Coastal A	Science	8.3	282.9	50.7
05/05/17	Science Flight #35-Helheim-Kangerdlugssuaq Gap B (High Priority)	Science	8.2	291.1	42.5
05/06/17	Science Flight #36-Helheim-K-EGIG-Summit	Science	8	299.1	34.5
05/08/17	Science Flight #37-Southeast Glaciers 01 (High Priority)	Science	8	307.1	26.5
05/10/17	Science Flight #38-Umanaq B (High Priority)	Science	8	315.1	18.5
05/11/17	Science Flight #39-ICESat-2 South (High Priority)	Science	8.1	323.2	10.4
05/12/17	Science Flight #40-Nuuk Fjords	Science	1.8	325	8.6
05/13/17	Transit Flight to Dover DE (to clear customs)	Transit	6.4	331.4	2.2

05/13/17	Transit Flight to Wallops Flight Facility	Transit	0.6	332	1.6

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 05/06/17 Science Report

Mission: OIB

Mission Summary:

Mission: K-EGIG-Summit (priority: baseline; last flown: 2015 spring)

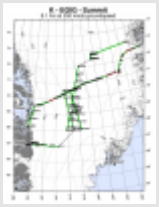
This mission was designed to accomplish a number of high-priority tasks. First, we refly the van den Broeke “K-Transect” in the Russell Glacier catchment, consisting of several sites where comprehensive glaciological measurements are collected annually. We also fly the EGIG traverse line, which is expected to be occupied as part of the CryoVex effort in spring 2014. We overfly the ICESat-1 track 412 Summit calibration site, and we fly two ICESat-2 groundtracks in the same area near Summit, with the expectation that these will become regular calibrations sites as well. For 2016, we add an overflight of a GreenTrACS core near IceSat track 0055. Finally we extend the coverage of the Jakobshavn basin upstream along ICESat-1 tracks, to capture continued inland progression of thinning there.

Intermittent clouds over central Greenland offered a strong if not perfect forecast for this last baseline mission. A good webcam view of Summit and favorable evolution during the day gave us confidence to select it. We directly overflew all of the K-transect sites as planned, with what was described as our most successful direct overflight of K-transect yet. We flew several ICESat tracks upstream of Jakobshavn Isbræ and a short grid near Summit Station multiple times. A moth, possibly already deceased, intermittently obscured the DMS window. It was successfully extracted from the below the DMS instrument by its harnessed operator, Eric Fraim, but then a second such insect appeared that could not be extracted. The mission continued with mostly interrupted surface visibility and overall better visibility than expected. We flew by Swiss Camp at the end of the EGIG line, performed a ramp pass at 1000’ and straight-and-level tests for MCoRDS along the Kangerlussuaq fjord.

Attached images:
1. Map of today’s mission
2. Snow-filled supraglacial stream near Kangerlussuaq (Lauren Andrews / NASA)
3. Summit Station, central Greenland (Lauren Andrews / NASA)
4. Steep land-terminating cliffs, northeastern Greenland (Lauren Andrews / NASA)
5. Swiss Camp, occupied in the last few days by Koni Steffen’s group (Hara Madhav Talasila / KU)

Images:

Map of today’s mission



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Snow-filled supraglacial stream near Kangerlussuaq

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Summit Station, central Greenland

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Steep land-terminating cliffs, northeastern Greenland

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Swiss Camp, occupied in the last few days by Koni Steffen’s group

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Submitted by: Joseph MacGregor on 05/09/17

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