

P-3 Orion 04/28/17

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

Flight Number: Science Flight #30-Penny 01 (Medium Priority)

Payload Configuration: OIB Arctic

Nav Data Collected: No

Total Flight Time: 6 hours

Submitted by: Cate Easmunt on 04/28/17

Flight Segments:

From:	BGSF	To:	BGSF
Start:	04/28/17 11:11 Z	Finish:	04/28/17 17:08 Z
Flight Time:	6 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 04/28/17 Science Report

Mission: OIB

Mission Summary:

Mission: Penny 01 (priority: medium)

This mission repeats survey lines over the Penny Ice Cap previously surveyed by the ATM/KU teams in 1995, 2000, and 2005, and adds several new lines along ICESat ground tracks over the ice cap. This mission, as currently configured, was last flown in 2015.

Southern Greenland's weather, which has been poor since Monday, finally began to clear in the southeast overnight last night. However, the clearing was accompanied by high winds in that sector. These high winds, combined with the mountainous terrain there, create moderate to severe turbulence for aircraft flying at low altitude, such as ours. For this reason, we avoided flying a higher-priority flight in southeastern Greenland today, and instead selected southern Baffin Island, which was mostly clear in this morning's satellite images. Indeed the weather over Penny Ice Cap remained clear throughout our mission, and we achieved 100% coverage of the planned lines.

The Snow Radar encountered a problem today, and as a result the instrument was unable to collect any usable data. The precise cause of the problem has not yet been determined, but efforts are ongoing by the CReSIS team to diagnose and repair the instrument. All other instruments performed normally.

Data volumes:

Accumulation Radar: 705 Gb

ATM: 76 Gb

CAMBOT: 39 Gb

DMS: 60 Gb

FLIR: 12 Gb

KT19: 8 Mb

MCoRDS: 606 Gb

Narrow Swath ATM: 21 Gb

Snow Radar: 0 Gb

total data collection time: 5.7 hrs

Images:

Map of Penny 01



[Read more](#)

Knife edge ridge



[Read more](#)

Valley wall



[Read more](#)

Submitted by: John Sonntag on 04/28/17

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