

P-3 Orion 03/24/13 - 03/25/13

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

Flight Number: 2013 Operation IceBridge Arctic #1469

Payload Configuration: 2013 Operation IceBridge Arctic

Nav Data Collected: No

Total Flight Time: 8.4 hours

Submitted by: Kelly Griffin on 03/24/13

Flight Segments:

From:	PAFA	To:	PAFA
Start:	03/24/13 15:46 Z	Finish:	03/25/13 00:10 Z
Flight Time:	8.4 hours		
Log Number:	13P001	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	2013 Operation IceBridge Arctic- Fairbanks science flight		

Flight Hour Summary:

	13P001
Flight Hours Approved in SOFRS	255
Total Used	211.6
Total Remaining	43.4

13P001 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/14/13	2013 Operation IceBridge Arctic #1447	Check	0.8	0.8	254.2	
03/14/13	2013 Operation IceBridge Arctic #1449	Check	2.1	2.9	252.1	
03/15/13	2013 Operation IceBridge Arctic #1448	Check	4	6.9	248.1	
03/18/13	2013 Operation IceBridge Arctic #1450	Transit	7.9	14.8	240.2	
03/20/13	2013 Operation IceBridge Arctic #1468	Science	6.3	21.1	233.9	
03/21/13	2013 Operation IceBridge Arctic #1456	Transit	8.5	29.6	225.4	
03/22/13 - 03/23/13	2013 Operation IceBridge Arctic #1474	Science	8.2	37.8	217.2	
03/23/13	2013 Operation IceBridge Arctic #1470	Science	7.8	45.6	209.4	
03/24/13 - 03/25/13	2013 Operation IceBridge Arctic #1469	Science	8.4	54	201	
03/26/13	2013 Operation IceBridge Arctic #1475	Transit	8.6	62.6	192.4	

03/27/13	2013 Operation IceBridge Arctic #1476	Science	7.9	70.5	184.5
03/28/13	2013 Operation IceBridge Arctic #1477	Science	3.3	73.8	181.2
04/02/13	2013 Operation IceBridge Arctic #1486	Transit	6.4	80.2	174.8
04/04/13	2013 Operation IceBridge Arctic #1484	Science	8.1	88.3	166.7
04/05/13	2013 Operation IceBridge Arctic #1489	Science	7.8	96.1	158.9
04/06/13	2013 Operation IceBridge Arctic #1487	Science	8	104.1	150.9
04/08/13	2013 Operation IceBridge Arctic #1491	Science	7.5	111.6	143.4
04/09/13	2013 Operation IceBridge Arctic #1493	Science	6.4	118	137
04/10/13	2013 Operation IceBridge Arctic #1493	Science	6.6	124.6	130.4
04/11/13	2013 Operation IceBridge Arctic #1495	Science	7.4	132	123
04/12/13	2013 Operation IceBridge Arctic #1496	Science	6.2	138.2	116.8
04/15/13	2013 Operation IceBridge Arctic #1502	Science	7.9	146.1	108.9
04/18/13	2013 Operation IceBridge Arctic #1504	Transit	5.2	151.3	103.7
04/19/13	2013 Operation IceBridge Arctic #1505	Science	7.4	158.7	96.3
04/20/13	2013 Operation IceBridge Arctic #1508	Science	6.8	165.5	89.5
04/22/13	2013 Operation IceBridge Arctic #1512	Science	7.8	173.3	81.7
04/23/13	2013 Operation IceBridge Arctic #1513	Science	7.7	181	74
04/24/13	2013 Operation IceBridge Arctic #1514	Science	8	189	66
04/25/13	2013 Operation IceBridge Arctic #1515	Science	7.5	196.5	58.5
04/26/13	2013 Operation IceBridge Arctic #1516	Science	7.1	203.6	51.4

05/02/13	2013 Operation IceBridge Arctic	Transit	7.5	211.1	43.9
05/02/13	2013 Operation IceBridge Arctic	Transit	0.5	211.6	43.4

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 03/24/13 - 03/25/13 Science Report

Mission: OIB

Mission Summary:

F05 Sea Ice - SIZRS ZigZag

Accomplishments

- Low-altitude survey (1,500 ft AGL) over the Beaufort Sea.
- ATM, snow and Ku-band radars, and DMS were operated on the survey lines.
- Satellite Tracks: none
- Repeat Mission: similar to 2012 mission

Science Data Report Summary

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	50 GB	UPS failure on navigation rack.
DMS	yes	149 GB	None.
Snow Radar	yes	80 GB	UPS failure.
Ku-band Radar	yes	80 GB	UPS failure.
Accumulation Radar	yes	93 GB	None.
MCoRDS	no	N/A	MCoRDS was not operated due to sea ice mission
KT-19	yes	9 MB	None.

Mission Report (Michael Studinger, Mission Scientist)

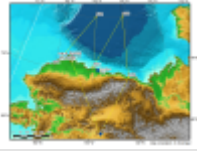
This is a new mission design for 2013, with similarities to the 2012 Alaskan Coastal Zigzag mission initiated in 2012. It is designed to sample sea ice along the north-south gradient in the southern Beaufort Sea. The leg flown along the 210th meridian facilitates a new collaboration between IceBridge and the Seasonal Ice Zone Reconnaissance Surveys (SIZRS) program, and it improves the temporal extent of the SIZRS time series into early spring. This mission also offered an opportunity to conduct (a) an overflight of in-situ snow and ice property measurements being collected in the Barrow region. In addition to Level-1 Requirements SI1 and SI2, this mission addresses sea ice level 1 projected requirement SIP2d by extending sea ice baseline observations to the southern Beaufort and Chukchi Seas; sea ice level 1 baseline requirement SI4 by conducting a sampling mission that is time-coincident with a CryoSat-2 track; sea ice baseline level-1 requirement SI9 by coordinating with a field campaign the complements the IceBridge measurements.

The flight started with failures on the UPS system on the ATM navigation rack and the snow and Ku-band radar rack. The teams were able to quickly develop work arounds and no data was lost. Snow and Ku-band radar collected data with a lower data rate than usual. We started the survey line with the ground site near Barrow and collected data over two corner reflectors that were clearly visible in the DMS imagery (see Fig. 2 below). The weather in the survey area was good and we collected 100% of the planned data. We collected 5.6 hours of science data. Data collection started 17:07 UTC and ended at 22:45 UTC.

We had a camera team and producer from Showtime onboard the aircraft during the flight.

Images:

Today's P-3 trajectory over the Beaufort Sea



[Read more](#)

DMS images of corner reflectors near Barrow



[Read more](#)

Submitted by: Michael Studinger on 03/24/13

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