

DC-8 10/26/16 - 10/27/16

Aircraft: [DC-8 - AFRC](#) ([See full schedule](#))

Flight Number: 1147

Payload Configuration: OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV G

Nav Data Collected: Yes

Total Flight Time: 12.1 hours

Comments: This was a very very long flight. Named Pole Hole West this flight covered a semi-circle to the west of the south pole around the 88° orbital arc that earth science satellites describe as they pass over Antarctica and beginning heading north again. Miles and miles of flight white desolation. Another successful data collection across the south pole itself.

Submitted by: Chris Jennison on 10/27/16

Flight Segments:

From:	SCCI	To:	SCCI
Start:	10/26/16 13:04 Z	Finish:	10/27/16 01:10 Z
Flight Time:	12.1 hours		
Log Number:	178010	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		

Images:

Amundsen-Scott South Pole Station



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Flight Hour Summary:

	178010
Flight Hours Approved in SOFRS	300
Total Used	306.9
Total Remaining	-6.9

178010 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
10/04/16	1135	Science	4	4	296	
10/05/16	1136	Science	2.7	6.7	293.3	
10/12/16	1138	Transit	10.9	17.6	282.4	
10/12/16	1139	Transit	3	20.6	279.4	
10/14/16 - 10/15/16	1140	Science	10.9	31.5	268.5	
10/15/16 - 10/16/16	1141	Science	11.8	43.3	256.7	
10/17/16 - 10/18/16	1142	Science	11.8	55.1	244.9	
10/20/16 - 10/21/16	1143	Science	11.4	66.5	233.5	
10/22/16	1144	Science	11	77.5	222.5	
10/24/16 - 10/25/16	1145	Science	11.5	89	211	

10/25/16 - 10/26/16	1146	Science	11.3	100.3	199.7
10/26/16 - 10/27/16	1147	Science	12.1	112.4	187.6
10/27/16 - 10/28/16	1148	Science	11.5	123.9	176.1
10/28/16 - 10/29/16	1149	Science	11	134.9	165.1
10/31/16 - 11/01/16	1150	Science	11	145.9	154.1
11/02/16 - 11/03/16	1151	Science	11.2	157.1	142.9
11/03/16 - 11/04/16	1152	Science	11.5	168.6	131.4
11/04/16 - 11/05/16	1153	Science	11.1	179.7	120.3
11/05/16 - 11/06/16	1154	Science	11.7	191.4	108.6
11/07/16 - 11/08/16	1155	Science	11.2	202.6	97.4
11/09/16 - 11/10/16	1156	Science	11.7	214.3	85.7
11/10/16	1157	Science	10.9	225.2	74.8
11/11/16 - 11/12/16	1158	Science	11.3	236.5	63.5
11/12/16 - 11/13/16	1159	Science	11.1	247.6	52.4
11/14/16	1160	Science	10.9	258.5	41.5
11/15/16 - 11/16/16	1161	Science	11.6	270.1	29.9
11/17/16 - 11/18/16	1162	Science	11.1	281.2	18.8
11/18/16 - 11/19/16	1163	Science	11.1	292.3	7.7
11/21/16	1165	Transit	11.6	303.9	-3.9
11/21/16	1164	Transit	3	306.9	-6.9

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 - DC-8 10/26/16 Science Report

Mission: OIB

Mission Summary:

OIB completed the baseline priority Pole Hole 88 West mission. The purpose of the flight was to sample the surface topography at the southern apex of half of all planned ICESat-2 orbits. Specifically, this flight sampled the ground tracks on the west Antarctica and Trans-Antarctic Mountains side of the Pole to provide "ground truth" for every ICESat-2 orbit.

Overall, the mission was very successful with good weather throughout the flight. A very thin haze layer was present in the beginning portion of the survey line, but ATM was able to easily range through it. The haze cleared up soon afterwards and clear skies were present throughout the rest of the survey line. All instruments worked well with no major issues, MCoRDS was even able to clearly see layers down to the bedrock on the real-time instrument display due to the clean signal.

ATM and MCoRDS also collected opportunistic high altitude data along the transit as well, but ceased transmission during the transit over South Pole Station to ensure the integrity of science experiments on the ground.

The MiniRad piggyback instrument was also flown on this mission and looked to have successfully collected good data, with the exception of a portion of the flight line where the mirror stopped rotating for a short time.

Data volumes

ATM: T5: 20 Gb T6: 12 Gb

FLIR: 8 Gb

Cambot: 12 Gb

DMS: 50 Gb

Snow/Ku radars: 160 Gb each

MCoRDS: 1.3 Tb (Low altitude)

AIRGrav: 5 Gb

data on: 1742 (Low altitude)

data off: 1950

File:

 [pole_hole_west_map.pdf](#)

Submitted by: Nathan T. Kurtz on 10/26/16

Page Last Updated: April 22, 2017

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