DC-8 - AFRC 10/16/18 - 10/17/18

Aircraft: DC-8 - AFRC (See full schedule)
Flight Number: 1296
Payload Configuration: ATM GPS/NAV_ATM Headwall_ATM-T6/T7_ATM FLIR_ATM CAMBOT MCoRDS/UWB Radar, Gravimeter
Nav Data Collected: Yes
Total Flight Time: 10.1 hours
Submitted by: Chris Jennison on 10/17/18
Flight Segments:

From:	SCCI	**To:**	SCCI
Start:	10/16/18 16:13 Z	**Finish:**	10/17/18 02:18 Z
Flight Time:	10.1 hours		
Log Number:	198006	**PI:**	Joseph MacGregor
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	North Peninsula – The takeoff was delayed three hours because of a broke intercom wire in the pilot's control yoke and enhanced security procedures at the airport that required everyone to be escorted to and from the plane. United States ambassador to Chile, Carol Perez, and her party flew aboard the DC-8 as observers. Two targets were dropped due to the flight shortening for reduced runway under repair. ATM: 100% data collection, instruments are all working well, no issues MCoRDS: 1.6 TB collected data, no issues Snow Radar: 1.2 TB collected data, instrument is working well, no issues Gravimeter: 3.9 GB collected data, instrument is working well, no issues		

Images:

DC-8 data tracks over the Antarctic northern Peninsula

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Flight Hour Summary:

	198006
Flight Hours Approved in SOFRS	345.8
Total Used	292.8
Total Remaining	53

198006 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
10/02/18	1287	Check	2.6	2.6	343.2	0
10/08/18	1289	Transit	10.1	12.7	333.1	0
10/08/18	1290	Transit	2.8	15.5	330.3	0
10/10/18 - 10/11/18	1291	Science	11.5	27	318.8	0
10/11/18 - 10/12/18	1292	Science	11.6	38.6	307.2	0
10/12/18 - 10/13/18	1293	Science	11.3	49.9	295.9	0
10/13/18 - 10/14/18	1294	Science	10.7	60.6	285.2	0

10/15/18 - 10/16/18	1295	Science	11.1	71.7	274.1	0
10/16/18 - 10/17/18	1296	Science	10.1	81.8	264	0
10/18/18 - 10/19/18	1297	Science	11.1	92.9	252.9	0
10/19/18 - 10/20/18	1298	Science	10.8	103.7	242.1	0
10/20/18 - 10/21/18	1299	Science	10.7	114.4	231.4	0
10/22/18 - 10/23/18	1300	Science	11.1	125.5	220.3	0
10/27/18 - 10/28/18	1301	Science	11.3	136.8	209	0
10/30/18 - 10/31/18	1302	Science	11.7	148.5	197.3	0
10/31/18 - 11/01/18	1303	Science	11.3	159.8	186	0
11/01/18	1304	Transit	0.6	160.4	185.4	0
11/03/18 - 11/04/18	1305	Science	11	171.4	174.4	0
11/04/18	1306	Science	10.8	182.2	163.6	0
11/05/18	1307	Science	10.4	192.6	153.2	0
11/07/18	1308	Science	10.4	203	142.8	0
11/09/18 - 11/10/18	1309	Science	11.1	214.1	131.7	0
11/10/18 - 11/11/18	1310	Science	10.6	224.7	121.1	0
11/11/18	1311	Science	10.8	235.5	110.3	0
11/12/18	1312	Science	10.7	246.2	99.6	0
11/14/18 - 11/15/18	1313	Science	11.2	257.4	88.4	0
11/15/18	1314	Science	10.3	267.7	78.1	0
11/16/18 - 11/17/18	1315	Science	10.1	277.8	68	0
11/19/18	1316	Transit	3.4	281.2	64.6	0
11/21/18	1317	Transit	11.6	292.8	53	0

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 2018 - DC-8 - AFRC 10/15/18 Science Report

Mission: OIB 2018
Mission Summary:

Mission: Stancomb Inshore
Priority: Medium

Today we had a very successful mission, even after a deterioration of weather forecasts from the previous evening throwing us a curveball and requiring us to pick an entirely new mission, one which we previously had not considered, and a slight airport runway issue this morning. Regardless of these events we were still able to take off on time.

The Stancomb Inshore is a land ice mission that was designed in 2018 and first flown today. This particular

mission was designed for radar and lidar data collection along 4 ICESat-2 ground tracks and also along the grounding line flow of the Stancomb-Wills glacier. Today's mission was chosen based on clear skies in the region, and because the forecasts were correct, we were able to achieve 100% data collection for all instruments, with no weather, environmental factors or instrument issues encountered. Other higher priority missions were not obtainable based on poor and deteriorating weather conditions throughout the day.

The 4 ICESat-2 ground tracks that were flown and their latency between the IS2 crossovers are listed below:
Line 0115, dt = 82 days
Line 0176, dt = 86 days
Line 0237, dt = 90 days
Line 0298, dt = 3 days

During the flight we were able to conduct 6 classroom chats with students in grades K-12 all across the country, from Alaska, Washington and Kansas; reaching a total of 148 students.

As we finished up our data collection, we got to witness the Antarctic sunset over the Brunt ice shelf and some Weddell sea ice, which was breathtaking and a satisfying way to wrap up our successful mission.

Attached images:
1. Map of today's mission (John Sonntag/NASA)
2. Snow radar image of snow on sea ice (right), with the abrupt edge of the Brunt ice shelf (left) (Aaron Wells/IU)
3. ATM T6 elevation map of a crevasse field on the Stancomb-Wills Glacier. (Matt Linksweller/NASA)
4. Panoramic photo of a large iceberg A68 (Jeremy Harbeck/NASA)
5. Sea ice floes (bottom), evaporation over the open water from a polynya (middle) adjacent to the Brunt ice shelf (top) (Linette Boisvert/NASA)
6. A crevasse field at sunset on the Stancomb-Wills Glacier (Linette Boisvert/NASA)
7. Sunset over sea ice and leads in the Weddell Sea (Jeremy Harbeck/NASA)

Images:

Figure 1

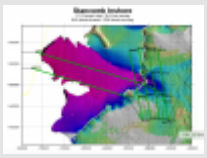

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Figure 2

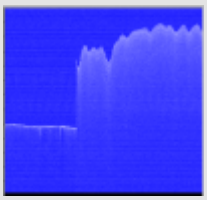

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Figure 3

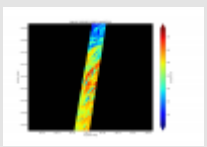

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Figure 4

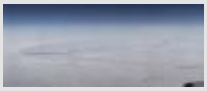

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Figure 5

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Figure 5

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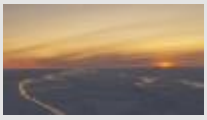
Figure 6



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Submitted by: Linette Boisvert on 10/21/18

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