DC-8 10/22/16

Aircraft:
DC-8 - AFRC (See full schedule)
Flight Number:
1144
Payload Configuration:
OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GRAVIMETER
Nav Data Collected:
Yes
Total Flight Time:
11 hours
Submitted by:
Chris Jennison on 10/27/16
Flight Segments:

From:	SCCI	**To:**	SCCI
Start:	10/22/16 12:49 Z	**Finish:**	10/22/16 23:49 Z
Flight Time:	11 hours		
Log Number:	178010	**PI:**	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Completed ?Bellingshausen 2? sea ice flight. Large areas near the continent had low clouds but we were able to fly a little lower to get under them most of the time. We lost some ATM/imagery data along the westernmost part of the data lines, but the rest of the flight went well. We had another problem with the Applanix POS even after replacing a part that could have been the culprit. ATM team is planning on installing another duplicate Applanix.		

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 10/22/16 Science Report

Mission:
OIB
Mission Summary:

OIB flew the baseline priority Bellingshausen 2 sea ice mission which was designed to provide coverage in the Bellingshausen Sea region by traversing future ICESat-2 orbit tracks. An underflight of CryoSat-2 was also achieved, with the satellite passing over at 13:14Z, which was about 3 hours and 40 minutes after we began the line. The weather forecast for this flight showed clear conditions on the eastern portion of the flight and cloudy conditions present on the western half. Due to the overall poor weather pattern over other target areas, this mission was the only viable option so we elected to take it. Conditions were indeed clear at the beginning of the flight line which included a transit over open water to provide the transition between the open ocean and the edge of the ice pack. The clouds began on the end of the first northern line along the CryoSat-2 track, so we descended in altitude and were able to get under them successfully. The clouds became thicker beginning around the second ICESat-2 track, and the altitude was adjusted throughout the flight to account for pilot visibility, avoiding the radar Nyquist transition zones, and avoiding contamination of the ATM start pulse. During the cloudy portion of the flight the ATM was generally able to see the surface throughout with the exception of the latter half of the most westbound line making for an overall successful flight.

In addition to sea ice data, opportunistic MCorDS data was also taken over a section of land ice near the western edge of the flight.

Data volumes

ATM: T5: 36 Gb T6: 38 Gb
FLIR: 14 Gb
Cambot: 9.5 Gb
DMS: 88 Gb
Snow/Ku radars: 585 Gb each
MCoRDS: 146 Gb
AIRGrav: 5 Gb
data on: 1440
data off: 2100

File:
bell2_flight_map.pdf
Submitted by:
Nathan T. Kurtz on 10/22/16

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