

DC-8 11/02/12 - 11/03/12

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

Flight Number: 130117

Payload Configuration: OIB Antarctic 2012

Nav Data Collected: Yes

Total Flight Time: 10.6 hours

Submitted by: Frank Cutler on 11/03/12

Flight Segments:

From:	SCCI	To:	SCCI
Start:	11/02/12 15:17 Z	Finish:	11/03/12 01:53 Z
Flight Time:	10.6 hours		
Log Number:	138003	PI:	Michael Studinger
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	<p>Depart SCCI at 1517Z. Did not perform calibration ramp pass due to low overcast weather conditions. Climb to cruise altitudes of FL330 to FL350. Perform gravity data line at FL350 starting earlier than initial point at 1738Z, cross original gravity line start waypoint at 1802Z, start descent at 1901Z, and ending 1922Z. Cross first low altitude science waypoint at 1922Z at 1500 ft. Continue to fly ground track pattern of six parallel lines over Filchner Ice Shelf. Pass over final low altitude waypoint at 2201Z. Perform radar pitch maneuvers at 2000 ft AGL at 2104Z. Perform second high altitude gravity line starting at climb north bound at 2202Z and ending at 2311Z at FL400. High altitude ATM data collected during transit segments. Climb to FL400 for transit to Punta Arenas. Land SCCI at 0153Z.</p>		

Flight Hour Summary:

	138003
Flight Hours Approved in SOFRS	200
Total Used	215.7
Total Remaining	-15.7

138003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
10/02/12	130101	Check	5	5	195	
10/03/12	130102	Check	3.2	8.2	191.8	
10/08/12 - 10/09/12	130103	Transit	10.7	18.9	181.1	
10/10/12	130104	Transit	3.2	22.1	177.9	
10/12/12	130105	Science	11.2	33.3	166.7	
10/13/12 - 10/14/12	130106	Science	10.9	44.2	155.8	
10/15/12	130107	Science	11.6	55.8	144.2	
10/16/12 - 10/17/12	130108	Science	11.8	67.6	132.4	
10/18/12	130109	Science	11.6	79.2	120.8	
10/19/12 - 10/20/12	130110	Science	10.2	89.4	110.6	
10/22/12	130111	Science	11.2	100.6	99.4	
10/23/12 - 10/24/12	130112	Science	11.3	111.9	88.1	
10/25/12	130113	Science	11.4	123.3	76.7	
10/27/12	130114	Science	11.4	134.7	65.3	
10/28/12 - 10/29/12	130115	Science	11.3	146	54	

11/01/12 - 11/02/12	130116	Science	12	158	42
11/02/12 - 11/03/12	130117	Science	10.6	168.6	31.4
11/04/12	130118	Science	11	179.6	20.4
11/06/12 - 11/07/12	130119	Science	9.4	189	11
11/07/12 - 11/08/12	130120	Science	11.5	200.5	-0.5
11/09/12	130121	Transit	3.3	203.8	-3.8
11/10/12 - 11/11/12	130122	Transit	11.6	215.4	-15.4
11/11/12	130123	Transit	0.3	215.7	-15.7

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 11/02/12 - 11/03/12 Science Report

Mission: OIB

Mission Summary:

F13 Recovery Glacier Offshore #01

Accomplishments

- Low-altitude survey (1,500 ft AGL) over the Filchner Ice Shelf between Berkner Island and the Recovery Glacier.
- Completed all planned survey lines.
- Collected additional high altitude ATM and DMS data transits.
- Collected high-altitude gravity data over the Ronne Ice Shelf.
- Conducted pitch maneuvers for time stamp verification of snow and Ku-band radars.
- ATM, MCoRDS, snow and Ku-band radars, gravimeter, and DMS were operated on the survey lines.
- Hosted a question and answer session on x-chat with schools from Punta Arenas.
- Satellite Tracks: none
- Repeat Mission: none

Science Data Report Summary

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	29 GB	None
DMS	yes	58 GB	None. Recorded 7566 frames.
Snow Radar	yes	292 GB	None
Ku-band Radar	yes	292 GB	None
MCoRDS	yes	418 GB	None
KT-19	yes	20 MB	None
Gravimeter	yes	1.3 GB	None
DC-8 On-board Data	yes	40 MB	None

Mission Report (Michael Studinger, Mission Scientist)

This morning a familiar pattern repeated itself again: a desperate look into the weather conditions over the Weddell Sea followed by the conclusion that a science mission over the Weddell Sea is a no go today. At least we were able to choose one of the remaining high-priority land ice missions with regional high priority.

Before starting engines an issue with one of the fuel gage indicators was identified. The crew was able to quickly

locate the cause for the problem and replaced the fuse in the power supply of the fuel gage indicator. Thanks to such an experienced and dedicated crew we were able to take off with only a one hour delay, which allowed us to complete the entire survey as planned. Great job everyone!

The weather in the target area was what we had expected from the model forecast. Shortly before takeoff we downloaded the latest MODIS satellite image (Fig. 2). The image showed two layers of clouds in the area, with the colors and shadows indicating that one layer was high with an intermediate layer below. The satellite image was acquired roughly 15 hours before we reached the survey area. Based on the satellite image and the model forecast we felt confident that we could work below the two layer of clouds. The conditions in the area were exactly what we had expected and we were able to complete the entire survey as planned and only had to climb for the last 2 minutes due to clouds below us.

We hosted a question and answer session on x-chat with a school from Punta Arenas.

ATM data collection	Time (UTC)	Hours
Begin low altitude data collection	19:19	
End low altitude data collection	22:00	2.7
Various high altitude segments		0.7
Total		3.4

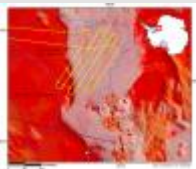
Images:

Trajectory of today's science mission over the Filchner Ice Shelf



[Read more](#)

Trajectory plotted over the MODIS false color image



[Read more](#)

Submitted by: Michael Studinger on 11/03/12

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