

## DC-8 10/12/12

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

Flight Number: 130105

Payload Configuration: OIB Antarctic 2012

Nav Data Collected: Yes

Total Flight Time: 11.2 hours

Submitted by: Frank Cutler on 10/12/12

### Flight Segments:

<b>From:</b>	SCCI	<b>To:</b>	SCCI
<b>Start:</b>	10/12/12 12:05 Z	<b>Finish:</b>	10/12/12 23:16 Z
<b>Flight Time:</b>	11.2 hours		
<b>Log Number:</b>	<a href="#">138003</a>	<b>PI:</b>	Michael Studinger
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	Depart SCCI at 1205Z on flight to Thwaites Glacier. Perform calibration ramp pass to the SE and overfly targets at 1213Z at 1500 AGL. Climb to cruise altitudes of between FL310 & FL350. Descend to cross first science way point at 1557Z. Perform nine passes over glacier and overfly final way point at 1940Z. Climb to FL400 for transit to Punta Arenas.		

### Flight Hour Summary:

	<b>138003</b>
<b>Flight Hours Approved in SOFRS</b>	200
<b>Total Used</b>	215.7
<b>Total Remaining</b>	-15.7

### 138003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">10/02/12</a>	130101	Check	5	5	195	
<a href="#">10/03/12</a>	130102	Check	3.2	8.2	191.8	
<a href="#">10/08/12 - 10/09/12</a>	130103	Transit	10.7	18.9	181.1	
<a href="#">10/10/12</a>	130104	Transit	3.2	22.1	177.9	
<a href="#">10/12/12</a>	130105	Science	11.2	33.3	166.7	
<a href="#">10/13/12 - 10/14/12</a>	130106	Science	10.9	44.2	155.8	
<a href="#">10/15/12</a>	130107	Science	11.6	55.8	144.2	
<a href="#">10/16/12 - 10/17/12</a>	130108	Science	11.8	67.6	132.4	
<a href="#">10/18/12</a>	130109	Science	11.6	79.2	120.8	
<a href="#">10/19/12 - 10/20/12</a>	130110	Science	10.2	89.4	110.6	
<a href="#">10/22/12</a>	130111	Science	11.2	100.6	99.4	
<a href="#">10/23/12 - 10/24/12</a>	130112	Science	11.3	111.9	88.1	
<a href="#">10/25/12</a>	130113	Science	11.4	123.3	76.7	
<a href="#">10/27/12</a>	130114	Science	11.4	134.7	65.3	
<a href="#">10/28/12 - 10/29/12</a>	130115	Science	11.3	146	54	
<a href="#">11/01/12 - 11/02/12</a>	130116	Science	12	158	42	
<a href="#">11/02/12 - 11/03/12</a>	130117	Science	10.6	168.6	31.4	
<a href="#">11/04/12</a>	130118	Science	11	179.6	20.4	

<a href="#">11/06/12 - 11/07/12</a>	130119	Science	9.4	189	11
<a href="#">11/07/12 - 11/08/12</a>	130120	Science	11.5	200.5	-0.5
<a href="#">11/09/12</a>	130121	Transit	3.3	203.8	-3.8
<a href="#">11/10/12 - 11/11/12</a>	130122	Transit	11.6	215.4	-15.4
<a href="#">11/11/12</a>	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 10/12/12 Science Report

Mission: OIB

Mission Summary:

#### F01 Thwaites Glacier Grounding Line #2

##### Accomplishments

- Low-altitude survey (1,500 ft AGL) over Thwaites Glacier grounding line area. Completed all planned survey lines.
- Collected additional high altitude data.
- ATM, MCoRDS, snow and Ku-band radars, gravimeter, and DMS were operated on the survey lines.
- Conducted one ramp pass (1,500 ft AGL) at Punta Arenas airport after takeoff for DMS, ATM, snow and Ku-band radar instrument calibration.
- Satellite Tracks: none
- Repeat Mission: none

##### Science Data Report Summary

Instrument	Operated	Data Volume	Instrument Issues/Comments
ATM	yes	37 GB	None
DMS	yes	96 GB	None
Snow Radar	yes	390 GB	None
Ku-band Radar	yes	390 GB	None
MCoRDS	yes	550 GB	None
KT-19	yes	20 MB	None
Gravimeter	yes	1.0 GB	None
DC-8 On-board Data	yes	40 MB	None

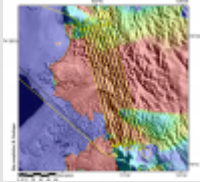
##### Mission Report (Michael Studinger, Mission Scientist)

We decided to take advantage of the unusually good conditions over the Thwaites Glacier area and chose Thwaites Glacier Grounding Line #2, which is a high priority mission in a high priority area. The AMPS model and satellite imagery were consistent with the forecast we got at the weather office at Punta Arenas airport and we were confident that this would be a successful day. The conditions were exactly what we had anticipated, with a strong offshore wind (25 – 30 kts) that provided slightly bumpy but cloud-free conditions in the survey area. Today's mission and last year's mission are both aligned with the UTIG AGASEA grid, and one of the lines (E05-W05) is co-located with one of the UTIG cross-flow lines to facilitate intercomparison of the OIB and UTIG measurements. Each of these two missions creates a grid with 5 km spacing offset from each other by 2.5 km, so that once both missions are flown the resulting grid will be spaced at 2.5 km. The data intended as input for ice sheet models. All instruments worked well and we collected 4 hours of science data. We also completed a ramp pass at Punta Arenas airport at 1,500 ft AGL after takeoff to ensure good data for DMS and ATM instrument calibration.

	Time (UTC)	Hours
Begin high altitude data collection		
Begin low altitude data collection	15:46	
End low altitude data collection	19:45	4.0
End high altitude data collection		
Total		4.0

**Images:**

### Trajectory of today's science mission over Thwaites Glacier



[Read more](#)

**Submitted by:** Michael Studinger on 10/14/12

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