

## DC-8 - AFRC 10/13/18 - 10/14/18

**Aircraft:**

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

**Flight Number:**

1294

**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:**

10.7 hours

**Submitted by:**

Chris Jennison on 10/17/18

**Flight Segments:**

<b>From:</b>	SCCI	<b>To:</b>	SCCI
<b>Start:</b>	10/13/18 14:05 Z	<b>Finish:</b>	10/14/18 00:45 Z
<b>Flight Time:</b>	10.7 hours		
<b>Log Number:</b>	<a href="#">198006</a>	<b>PI:</b>	Joseph MacGregor
<b>Funding Source:</b>	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	South Peninsula - Lurabee Glacier, Stefansson Sound, Palmer Land, George VI Sound ATM: 100% data collection, instruments are all working well, no issues MCoRDS: 1.5 TB collected data, no issues Snow Radar: 1.7 TB collected data, instrument is working well, no issues Gravimeter: 3.8 GB collected data, instrument is working well, no issues		

**Flight Hour Summary:**

	<b>198006</b>
<b>Flight Hours Approved in SOFRS</b>	345.8
<b>Total Used</b>	292.8
<b>Total Remaining</b>	53

**198006 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">10/02/18</a>	1287	Check	2.6	2.6	343.2	0
<a href="#">10/08/18</a>	1289	Transit	10.1	12.7	333.1	0
<a href="#">10/08/18</a>	1290	Transit	2.8	15.5	330.3	0
<a href="#">10/10/18 - 10/11/18</a>	1291	Science	11.5	27	318.8	0
<a href="#">10/11/18 - 10/12/18</a>	1292	Science	11.6	38.6	307.2	0
<a href="#">10/12/18 - 10/13/18</a>	1293	Science	11.3	49.9	295.9	0
<a href="#">10/13/18 - 10/14/18</a>	1294	Science	10.7	60.6	285.2	0
<a href="#">10/15/18 - 10/16/18</a>	1295	Science	11.1	71.7	274.1	0
<a href="#">10/16/18 - 10/17/18</a>	1296	Science	10.1	81.8	264	0
<a href="#">10/18/18 - 10/19/18</a>	1297	Science	11.1	92.9	252.9	0
<a href="#">10/19/18 - 10/20/18</a>	1298	Science	10.8	103.7	242.1	0
<a href="#">10/20/18 - 10/21/18</a>	1299	Science	10.7	114.4	231.4	0

<a href="#">10/22/18 - 10/23/18</a>	1300	Science	11.1	125.5	220.3	0
<a href="#">10/27/18 - 10/28/18</a>	1301	Science	11.3	136.8	209	0
<a href="#">10/30/18 - 10/31/18</a>	1302	Science	11.7	148.5	197.3	0
<a href="#">10/31/18 - 11/01/18</a>	1303	Science	11.3	159.8	186	0
<a href="#">11/01/18</a>	1304	Transit	0.6	160.4	185.4	0
<a href="#">11/03/18 - 11/04/18</a>	1305	Science	11	171.4	174.4	0
<a href="#">11/04/18</a>	1306	Science	10.8	182.2	163.6	0
<a href="#">11/05/18</a>	1307	Science	10.4	192.6	153.2	0
<a href="#">11/07/18</a>	1308	Science	10.4	203	142.8	0
<a href="#">11/09/18 - 11/10/18</a>	1309	Science	11.1	214.1	131.7	0
<a href="#">11/10/18 - 11/11/18</a>	1310	Science	10.6	224.7	121.1	0
<a href="#">11/11/18</a>	1311	Science	10.8	235.5	110.3	0
<a href="#">11/12/18</a>	1312	Science	10.7	246.2	99.6	0
<a href="#">11/14/18 - 11/15/18</a>	1313	Science	11.2	257.4	88.4	0
<a href="#">11/15/18</a>	1314	Science	10.3	267.7	78.1	0
<a href="#">11/16/18 - 11/17/18</a>	1315	Science	10.1	277.8	68	0
<a href="#">11/19/18</a>	1316	Transit	3.4	281.2	64.6	0
<a href="#">11/21/18</a>	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 - DC-8 - AFRC 10/13/18 Science Report

#### Mission:

OIB

#### Mission Summary:

Mission: South Peninsula IS-2  
Priority: Baseline

This is a repeat flight, designed to assess dh/dt of four glaciers draining the Dyer Plateau. These are the Fleming, Maitland, Lurabee, and Clifford. We also re-fly a portion of the grounding line along the George VI Ice Shelf, which was last flown in 2011. For 2018 we replace a coast-parallel grid along the western flank of the Dyer Plateau with a similar grid of ICESat-2 ground tracks. We also fly a pair of lines across the northern edge of the George VI ice shelf, primarily to fill a small gap in gravity measurements there. The Fleming Glacier lines in this mission are supplemented by a 10 km grid over Fleming in the Alexander-Fleming flight.

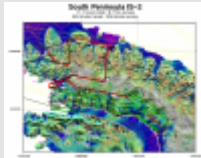
Clouds in the Weddell Sea were more extensive than previously forecast for day, favoring a baseline mission on the southern Antarctic Peninsula rather than over the Weddell Sea. Following a delayed take-off, prior to beginning the survey we had to decrease the survey length by an hour to respect crew duty day limits. We opted to remove the highest two ICESat-2 tracks on the southern end of the survey, between Y03000 and Y03002, and between Z12453 and Z12450, so that we could fully preserve the gravity-focused lines over George VI Ice Shelf and the lower-elevation ICESat-2 tracks. Passing over clouds across the northern Peninsula, conditions were ideal for the duration of the mission, with weak winds and bluebird skies. Data collection proceeded very smoothly, although a bothersome IMU failed early in the flight that we are continuing to troubleshoot. We surveyed four flowlines, the Dyer Plateau, the location of the former Wordie Ice Shelf, the outlets east of George VI Ice Shelf along ICESat-2 tracks, and finally the northern end of the ice shelf itself. The crew from CBS News joined us for a second day, conducting additional interviews.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. Mt. Balfour, as viewed from Wordie Bay, with the DC-8's shadow in the foreground (Joe MacGregor / NASA)
3. A cirque on the flank of the Dyer Plateau east of George VI Ice Shelf (Michael Studinger / NASA)
4. Cape Jeremy, flanking the northern entrance to George VI Sound (Jeremy Harbeck / NASA)
5. CAMBOT nadir visible camera image of crevasses on the Antarctic Peninsula (Jeremy Harbeck / NASA)

Images:

## Map of today's mission



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## Mt. Balfour, as viewed from Wordie Bay, with the DC-8's shadow in



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## A cirque on the flank of the Dyer Plateau east of George VI Ice Shelf



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## Cape Jeremy, flanking the northern entrance to George VI Sound



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## CAMBOT nadir visible camera image of crevasses on the Antarctic



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Submitted by:

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