

DC-8 - AFRC 10/12/18 - 10/13/18

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

Flight Number: 1293

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: 11.3 hours

Submitted by: Chris Jennison on 10/17/18

Flight Segments:

| | | | |
|---------------------------|--|----------------|------------------|
| From: | SCCI | To: | SCCI |
| Start: | 10/12/18 13:06 Z | Finish: | 10/13/18 00:24 Z |
| Flight Time: | 11.3 hours | | |
| Log Number: | 198006 | PI: | Joseph MacGregor |
| Funding Source: | Bruce Tagg - NASA - SMD - ESD Airborne Science Program | | |
| Purpose of Flight: | Science | | |
| Comments: | <p>Here are some details on today's flight. "Stancomb Outboard", which is a new OIB flight and consisted of 5 Icesat-2 tracks and two tracks along the ice tongue of the glacier. There was an incident with the aircraft behind us during the start of our taxi. You probably have a better understanding than I do, but from what I understand, their stairs blew back from our exhaust and ended up hitting one of their engine cowlings. Due to this incident, it sounds like we will be relegated to performing engine starts on Taxiway E (or perhaps another suitable location) for the remainder of our stay here. We also had an issue with the housekeeping system hygrometer popping it's circuit breaker. Initial look at the problem seems to indicate that the currently-installed system (1011C) draws more power than the predecessor systems (1011A and 1011B), but the circuit breaker was not properly sized up to accommodate the higher power draw. Other than that, the flight went very smooth. The aircraft and science instruments all performed well. I think the CBS folks got just about everything they wanted for media. ATM: 100% data collection, instruments are all working well, no issues MCoRDS: 100% data collection, instrument is working well, no issues Snow Radar: 100% data collection, instrument is working well, no issues Gravimeter: 100% data collection, instrument is working well, no issues Data: 100% data collection for KT-19, only significant issue being the aforementioned hygrometer issue</p> | | |

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 - DC-8 - AFRC 10/12/18 Science Report

Mission: OIB

Mission Summary:

Mission: Stancomb Outboard

Priority: High

This new flight is designed to provides radar and lidar data along ICESat-2 ground tracks, mostly offshore of the grounding line of the Stancomb-Wills Glacier. This region has not been sampled by OIB prior to 2018.

A steadily improving forecast for this region and the Filchner Ice Shelf, but not yet clear enough elsewhere, meant that we selected this mission in a region that OIB had never before surveyed. A ramp pass at 2000 ft AGL was collected prior to the initial transit. Our weather assessment was quite consistent with that which we observed, but with none of the expected fog on the tongue. Low clouds dissipated as we approached the Stancomb-Willis Glacier Tongue. We extended the initial along-flow line by several minutes, so that we could cross the downstreammost ICESat-2 track and then beyond that by 70 seconds for a more useful gravity cross-over. We observed exceptionally large freeboards of some rifts at the end of that along-flow line. Otherwise, the flight proceeded smoothly and all lines/tracks were surveyed successfully. Winds were exceptionally light and generally less than 5 knots. A video crew from CBS News joined our flight and conducted several interviews during the course of the flight. A preliminary schedule has their segment(s) airing sometime next week (TBD). All instruments reported excellent data collection. ATM further experimented with Headwall data collection and better

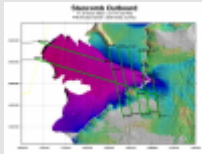
refined their acquisition procedure for it. 100% all around.

Attached images:

1. Map of today's mission (NASA / John Sonntag)
2. The transition from floating to grounded ice across Lyddan Ice Rise, east of Stancomb-Willis Glacier Tongue (Joe MacGregor / NASA)
3. A large rift bisecting part of the Stancomb-Willis Glacier Tongue (Aaron Wells / NASA)
4. Linette Boisvert being interviewed by Mark Phillips of CBS News onboard NASA's DC-8 (Jim Yungel / NASA)
5. An iceberg in the Weddell Sea surrounded by sea ice (Linette Boisvert / NASA)
6. Sea smoke near the terminus of Stancomb-Willis Glacier Tongue (Joe MacGregor / NASA)

Images:

Map of today's mission



[Read more](#)

The transition from floating to grounded ice across Lyddan Ice Rise,



[Read more](#)

A large rift bisecting part of the Stancomb-Willis Glacier Tongue



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OIB Deputy Project Scientist Linette Boisvert being interviewed by



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An iceberg in the Weddell Sea surrounded by sea ice



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Sea smoke near the terminus of Stancomb-Willis Glacier Tongue



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Submitted by: Joseph MacGregor on 10/17/18

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