

## DC-8 - AFRC 10/30/18 - 10/31/18

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

**Flight Number:** 1302

**Payload Configuration:** OIB 2018 Configuration - ATM-Cambot, ATM-GPS/ATM-NAV, ATM-FLIR, ATM-T6, ATM-T7, Gravimeter, MCoR Snow RADAR, and piggybacks ARMAS & Tinman

**Nav Data Collected:** Yes

**Total Flight Time:** 11.7 hours

**Comments:** NASA 817 carried the OIB aircrew and science teams on another long transit, about 2500 miles (a little under 5 hours) each way. The OIB science low altitude flight line (at the end of the transit) was flown at 1500 ft AGL along an arc at 88S where each IceSat-2 orbit converges, making this 88S arc a very good calibration site. The weather was perfect, sunny blue skies over the flat white snow covered Antarctic Plateau. All DC8 OIB remote sensing instruments had another routine day, with 100% data coverage. The DC-8 returned in good shape with no writeups.

**Submitted by:** Timothy Moes on 10/30/18

### Flight Segments:

<b>From:</b>	SCCI	<b>To:</b>	SCCI
<b>Start:</b>	10/30/18 13:14 Z	<b>Finish:</b>	10/31/18 00:58 Z
<b>Flight Time:</b>	11.7 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		

### 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 10/30/18 Science Report

**Mission:** OIB

**Mission Summary:**

Mission: Hamilton Line – Ronne Sector  
Priority: Baseline

Today, IceBridge successfully completed its 4<sup>th</sup> baseline priority flight: Hamilton Line – Ronne. Clouds shrouded most of the Antarctic Peninsula and the Amundsen Sea Embayment today, making the Hamilton Line – Ronne a straightforward (and ultimately wise) choice. As expected, the thick coastal clouds gave way to bright blue skies by the time we reached the survey line.

The entire IceBridge team made for an extremely smooth and successful mission today, and we thank them for their noticeable hard work, dedication, and unfailing sense of humor. The latter was of critical importance for this particular flight because of the whopping 10 hours of transit. We were treated to excellent views of the Ellsworth and Pensacola Mountains, providing relief from the monotony of sastrugi fields. All instrument teams reported excellent data collection over the short ~1.5-hour survey.

The design of the Hamilton Line – Ronne covers about one-third of the southernmost extent of the ICESat-2 ground tracks; thus, latency is variable.

OIB had two major milestones today!

1. Our K-12 Communications Coordinator, Emily Schaller, informed me that today we connected with 377 students in New York, Illinois, Alaska, Utah, Chile and Ghana, bringing our total up over 10,000 students reached through these chats during OIB 2012-2018
2. NASA's Katy Mersmann did a fantastic job of leading a Facebook Live tour of the DC-8 before we left Punta Arenas. She managed to skillfully interview several of the folks on board in rapid succession. Asof takeoff we had 7,500 views, which rose to 21,600 by landing.

Media: Angela Posada, a freelance writer, joined us once more.

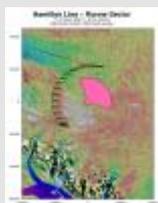
Outlook: Tomorrow's forecast for (Happy) Halloween over a few of our baseline targets in West Antarctica is favorable. Packing and transit to Ushuaia will follow the flight tomorrow along with a rest day. Flights are expected to resume Saturday.

List of attached figures:

1. Map of today's science mission. (John Sonntag/NASA)
2. ATM T-6 elevation map shows well defined directional sastrugi over the relatively flat surface around 88°S. (Matt Linkswiler/NASA)
3. Strong bedrock returns and beautiful internals from MCoRDS (Jilu Li & Victor Berger Silva/CRISIS)
4. Ice rumpling and crevassing as it bends off the high plateau near Foundation Ice Stream (Katy Mersmann/NASA)
5. Jagged peaks barely poke through ice in the Pensacola Mountains, vivid blue ice forms on their leeward side (Brooke Medley/NASA)
6. Low clouds enclose steep mountains on Alexander Island in the evening sun (Brooke Medley/NASA)

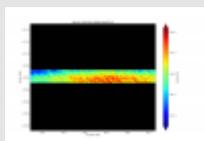
Images:

## Figure 1



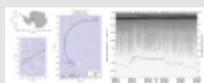
[Read more](#)

## Figure 2



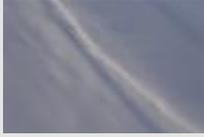
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## Figure 3



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## Figure 4



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## Figure 5



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## Figure 6



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**Submitted by:** Brooke Medley on 11/11/18

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