

## OIB - Gulfstream V - JSC 11/15/19 Science Report

### Aircraft:

[Gulfstream V - JSC](#) ([See full schedule](#))

### Date:

Friday, November 15, 2019

### Mission:

OIB

### Mission Location:

Denman 02

### Mission Summary:

Mission: Denman 02

Priority: Medium

This mission is designed to survey the centerlines of the Denman and Scott Glaciers from the edge of the Shackleton Ice Shelf to points above their fastest-flowing regions.

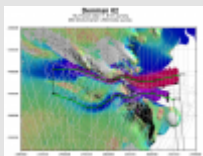
A mildly conflicting forecast for the Denman Glacier region but presently clear skies led us to select this mission, focusing on the higher priority Denman Glacier flowline and saving the Scott Glacier flowline for a future mopup mission. The Denman Glacier area was clear this morning in both forecast models and imagery, but two models (ECMWF and WRF) disagreed with a third (GFS) about the timing of worsening cloud cover as the day progressed. GFS indicated that the clouds would move in early, with the other two models predicting the clouds to move in after we departed the area. Chalk up a victory up for the American model (GFS), because we encountered thick overcast near Denman Glacier's grounding line as we began our ascent of the glacier. Fortunately the cloud bases were fairly high at around 10,000 ft and we were able to complete the Denman run entirely, though in poor lighting conditions and, at times, poor surface visibility, with some turbulence at the upstream end of the flowline. All instruments performed well, 100% successful data collection minus bad MCoRDS channel, which detected significant ice-thickness variability along-flow. As expected based on prior far-westerly flights, we could not attempt the Scott Glacier centerline due to fuel concerns. We performed a ramp pass at 1200 ft AGL on arrival at Hobart.

Attached images:

1. Map of today's mission (John Sonntag / NASA)
2. Ice-covered Mill Island, bookending the eastern end of the Shackleton Ice Shelf. The dark area behind the circular island is known as the Highjump Archipelago, named for the massive US Navy Antarctic mapping effort undertaken in the late 1940s (John Sonntag / NASA)
3. The Obruchev Hills under thick overcast, situated between the grounding lines of Denman and Scott Glaciers (John Sonntag / NASA)

### Images:

#### Map of today's mission



[Read more](#)

#### Ice-covered Mill Island, bookending the eastern end of the Shackleton Ice



[Read more](#)

#### The Obruchev Hills under thick overcast, situated between the grounding

## lines of Denman and Scott Glaciers



[Read more](#)

**Submitted by:**

Joseph MacGregor on 11/15/19

**Related Flight Report:**

### Gulfstream V - JSC 11/14/19 - 11/15/19

**Flight Number:**

GV-68

**Payload Configuration:**

OIB

**Nav Data Collected:**

No

**Total Flight Time:**

10.4 hours

**Submitted by:**

Derek Rutovic on 11/17/19

**Flight Segments:**

<b>From:</b>	YMHB	<b>To:</b>	YMHB
<b>Start:</b>	11/14/19 21:48 Z	<b>Finish:</b>	11/15/19 08:10 Z
<b>Flight Time:</b>	10.4 hours		
<b>Log Number:</b>	<a href="#">205003</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>Miles Flown:</b>	4500 miles		

**Flight Hour Summary:**

	<b>205003</b>
<b>Flight Hours Approved in SOFRS</b>	350
<b>Total Used</b>	248.4
<b>Total Remaining</b>	101.6

**205003 Flight Reports**

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
<a href="#">10/17/19</a>	GV-48	Science	1.9	1.9	348.1	800
<a href="#">10/17/19</a>	GV-49	Science	3.2	5.1	344.9	1400
<a href="#">10/19/19</a>	GV-50	Transit	8.2	13.3	336.7	3600
<a href="#">10/21/19 - 10/22/19</a>	GV-51	Transit	5.3	18.6	331.4	2300
<a href="#">10/22/19</a>	GV-52	Transit	7	25.6	324.4	3100
<a href="#">10/23/19 - 10/24/19</a>	GV-53	Science	10.2	35.8	314.2	4400
<a href="#">10/24/19 - 10/25/19</a>	GV-54	Science	10.1	45.9	304.1	4400
<a href="#">10/26/19 - 10/27/19</a>	GV-55	Science	10.4	56.3	293.7	4500

<a href="#">10/27/19 - 10/28/19</a>	GV-56	Science	10.2	66.5	283.5	4400
<a href="#">10/28/19 - 10/29/19</a>	GV-57	Science	10.1	76.6	273.4	4400
<a href="#">10/29/19 - 10/30/19</a>	GV-58	Science	10	86.6	263.4	4400
<a href="#">10/31/19 - 11/01/19</a>	GV-59	Science	10.2	96.8	253.2	4400
<a href="#">11/02/19 - 11/03/19</a>	GV-60	Science	10.6	107.4	242.6	4600
<a href="#">11/03/19 - 11/04/19</a>	GV-61	Science	9.6	117	233	4200
<a href="#">11/04/19 - 11/05/19</a>	GV-62	Science	10.3	127.3	222.7	4500
<a href="#">11/05/19 - 11/06/19</a>	GV-63	Science	10.2	137.5	212.5	4400
<a href="#">11/07/19 - 11/08/19</a>	GV-64	Science	10	147.5	202.5	4400
<a href="#">11/08/19 - 11/09/19</a>	GV-65	Science	9.5	157	193	4100
<a href="#">11/09/19 - 11/10/19</a>	GV-66	Science	10.2	167.2	182.8	4400
<a href="#">11/13/19 - 11/14/19</a>	GV-67	Science	10.2	177.4	172.6	4400
<a href="#">11/14/19 - 11/15/19</a>	GV-68	Science	10.4	187.8	162.2	4500
<a href="#">11/16/19 - 11/17/19</a>	GV-69	Science	9.9	197.7	152.3	4300
<a href="#">11/17/19 - 11/18/19</a>	GV-70	Science	9.9	207.6	142.4	4300
<a href="#">11/18/19 - 11/19/19</a>	GV-71	Science	10.3	217.9	132.1	4500
<a href="#">11/19/19 - 11/20/19</a>	GV-72	Science	10.4	228.3	121.7	4500
<a href="#">11/20/19 - 11/21/19</a>	GV-73	Science	3.5	231.8	118.2	1500
<a href="#">11/25/19</a>	GV-74	Ferry	5.7	237.5	112.5	2500
<a href="#">11/26/19</a>	GV-75	Ferry	10.9	248.4	101.6	4700

*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.*

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