

## Gulfstream V - JSC 10/31/19 - 11/01/19

**Aircraft:**

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

**Flight Number:**

GV-59

**Payload Configuration:**

OIB

**Nav Data Collected:**

No

**Total Flight Time:**

10.2 hours

**Submitted by:**

Debra Willett on 11/01/19

**Flight Segments:**

<b>From:</b>	YMHB	<b>To:</b>	YMHB
<b>Start:</b>	10/31/19 22:00 Z	<b>Finish:</b>	11/01/19 08:11 Z
<b>Flight Time:</b>	10.2 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>	4400 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.

#### Related Science Report:

### OIB - Gulfstream V - JSC 11/01/19 Science Report

**Mission:**

OIB

**Mission Summary:**

Flight Report: 11/01/19

*OUTLOOK FOR TOMORROW: While we are waiting for conditions to clear in the Rennick and Cook areas of the Antarctic ice sheet, areas are clearing just to the east of where we have flown, and we have a few viable land ice options for tomorrow. The eastern Antarctic sea ice is still socked in, so that is not an option for tomorrow.*

Mission: ASUMA Traverse

Priority: **Medium**

The forecasts for today showed the only viable area of East Antarctica to be areas near the Adelie Coasts, with no options for any Eastern Antarctic sea ice missions. Luckily, we had 2 viable options in this area to choose from today. Our choice to fly the medium priority land ice mission ASUMA Traverse was picked because katabatic winds flowing off the continent were much higher along the coasts, so choosing the other option, the SPRI-Adelie mission could have potentially put us in some bad turbulence. The ASUMA mission goes inland where winds were less.

Just as we expected, we were greeted with clear skies and a little turbulence near the coast, but then smooth conditions inland for the majority of the time while we collected data.

This mission is designed to overfly the ASUMA Traverse which was a ground survey of snow accumulation taken by scientists from France's Antarctic Station Dumont D'Urville, which we also flew by on this mission. The ASUMA Traverse was done in 2016, and the main goals were to collect data on snow and snow

accumulation in order to get a better understanding of the snow physics and the processes that are responsible for its temporal and spatial variations in this part of Antarctica. Today IceBridge was able to bridge the data gap from these measurements on the ground to satellite data. Snow processes and accumulation are important in Antarctica because of its role in surface mass balance of the ice sheet.

Today OIB collected valuable snow radar, MCoRDS, and ATM data along this traverse line. All instruments performed well with 100% data collection. So far we haven't had any major aircraft or instrument issues during the campaign. **?You little ripper!?** (Aussie for ?That?s great, Mate!?)

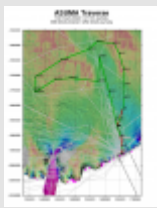
ICESat-2 RGT latencies (+/- indicates OIB surveyed after/before ICESat-2):  
None

Data volumes collected during today?s mission, which consisted of 3.2 hours of data collection:

ATM: 53 Gb  
CAMBOT: 91 Gb  
FLIR: 7 Gb  
Narrow Swath ATM: 78 Gb green  
Narrow Swath ATM: 72 Gb IR  
VNIR: 28 Gb  
SWIR: 40 Gb  
Snow Radar: 700 Gb  
MCoRDS: 317 Gb  
Gravity: 4.5 Gb

#### 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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**Submitted by:**  
Linette Boisvert on 11/06/19

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