

## Gulfstream V - JSC 10/28/19 - 10/29/19

**Aircraft:**

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

**Flight Number:**

GV-57

**Payload Configuration:**

OIB

**Nav Data Collected:**

No

**Total Flight Time:**

10.1 hours

**Submitted by:**

Debra Willett on 10/29/19

**Flight Segments:**

<b>From:</b>	YMHB	<b>To:</b>	YMHB
<b>Start:</b>	10/28/19 22:30 Z	<b>Finish:</b>	10/29/19 08:33 Z
<b>Flight Time:</b>	10.1 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 10/29/19 Science Report

**Mission:**

OIB

**Mission Summary:**

Flight Report: 10/29/19

*OUTLOOK FOR TOMORROW:* Weather appears to be worsening over the western portions of East Antarctica and we assume we will not be able to fly any of those missions tomorrow. Missions farthest to the east around Denman Glacier are the most viable options for tomorrow as of right now, but **?she?ll be right?** (Aussie for ?it?ll turn out ok?).

Mission: Casey

Priority: **Medium**

IceBridge completed the medium priority sea ice mission Casey today. Just as predicted and seen in the radiosonde and webcam images at Casey Station this morning, we were met with clear conditions when we began our survey. Towards the sea ice edge, the ice appeared thinner, and was much more broken up than closer to the continent. There was also a large variety of sea ice floes: large and small, some bare ice where the snow was completely blown off, floes covered with strastrugi, and other flows where the snowpack on top of the sea ice appeared to be flooded or beginning to melt/saturated. A large polynya was located just outside of Casey station as well. Grease ice was also forming in long tendrils in the polynya due to strong winds blowing off the continent. This also created some turbulence during the flight, especially over portions of the ice sheet.

This mission is important to both the sea ice and land ice science communities in that we surveyed parts of 3 ICESat-2 RGTs over both ice types. The reason for this is because we are coordinating this mission with an ICESat-2 effort where intensive snow and ice measurements on the ground will be made near Casey station

along these same IS-2 tracks we flew in the coming weeks. The snow and ice data will be used to help validate snow radar snow thickness on the sea ice, and accumulation layers on the land ice. Both are crucial for sea ice volume and surface mass balance estimates produced using IS-2 data. Today IceBridge once again bridged the gap between ground measurements and satellite measurements.

Two of the survey lines were cut from this mission due to fuel concerns, however this worked in our favor because they were located in the center of this large polynya where no sea ice was present. During the flight all instruments performed well and there was 100% data collection.

ICESat-2 RGT latencies (+/- indicates OIB surveyed after/before ICESat-2):

0575 (- 5 days)

0567 (- 5 days)

0773 (-18 days)

Data volumes collected during today's mission, which consisted of 1.6 hours of data collection:

ATM: 27 Gb

CAMBOT: 49 Gb

FLIR: 3 Gb

Narrow Swath ATM: 41 Gb green

Narrow Swath ATM: 34 Gb IR

VNIR: 12 Gb

SWIR: 18 Gb

Snow Radar: 310 Gb

MCoRDS: 164 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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## Figure 6



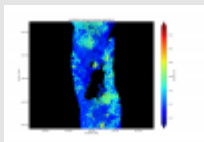
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## Figure 7



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## Figure 8



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

NASA Official: Marilyn Vasques

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