



## July 6, 2019 Payload 2 Daily Flight Report



**Date:** 2019-07-06

**Flight Campaign ID:** 2019\_P2C1

**Airport, FBO ID, City:** Wiley Post-Will Rogers Memorial (PABR) - Barrow, AK Deadhorse Airport (PASC) - Deadhorse, AK

**Domain:** 18

**Sites Flown:** BARR\_P1 (Barrow Environmental Observatory Priority 1)

**Days left in Domain:** 21

**Report Author:** Cameron Chapman

**Flight Crew:** Cameron Chapman, Ivana Vu

**Flight Hours:** 01.30, 02:01, 01.30

**Ground/GPS:** Cameron, Ivana Vu

**Hours until maintenance:** 70.25

**Pilots:** Mark Solper, Stephen Brawders

**Additional Personnel:**

**GPS Instruments:** C-BRW1, U-SG27

### Summary

Low IFR conditions in Deadhorse this morning lifted by early afternoon. Toolik was covered with low cumulus clouds and Barrow was reporting clearing conditions. After checking the weather cameras to confirm and referencing the phenology cameras, The crew took to the sky to Barrow. Upon arriving, borderline green flight conditions were present. After refueling and a minor aircraft mechanical issue prior to takeoff, the crew was able to collect 11 lines under “yellow” conditions.

### Concerns

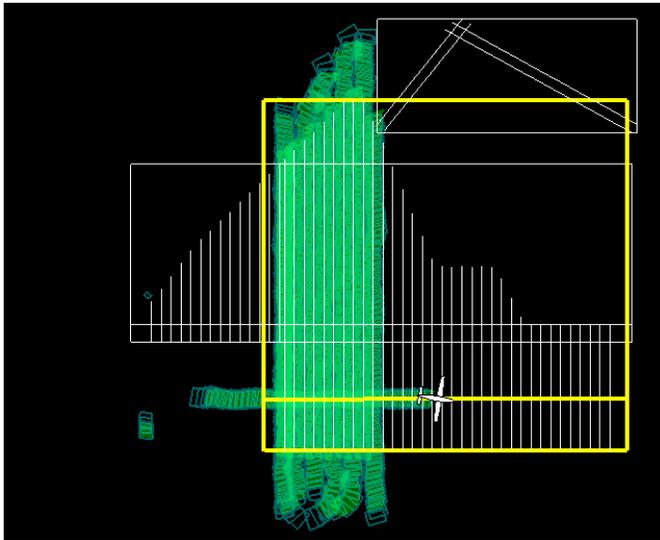
- During the first line of collection, NiS’s Geopaint was missing. In addition the NAV file was displaying 0 values despite the C-MIGITS working correctly and the ground and air test working as expected. An in air reboot on the Non-ECS resolved the issue.
- Aircraft mechanical issues delayed the 2<sup>nd</sup> takeoff. Prior to takeoff the pilots noticed the prop gauge was flocculating erratically, we taxied back to the ramp and diagnosed the issue as the Beta backup system.

### Comments

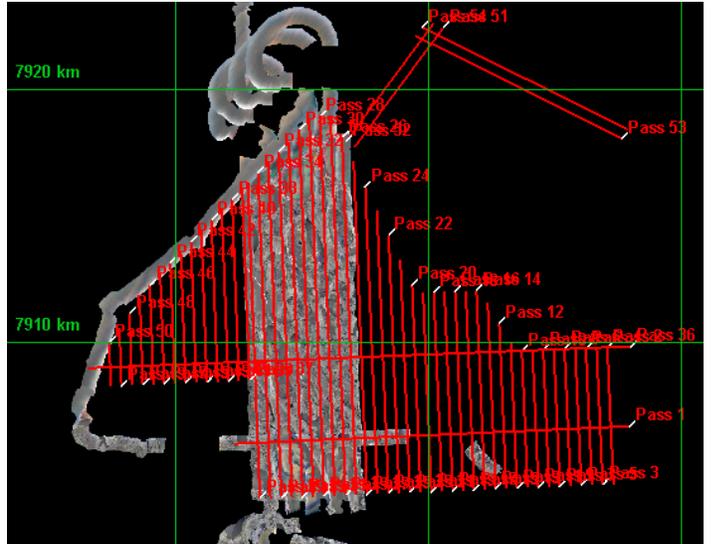
- Collected 11 line at BARR P1
- Crew completed startups and shutdown in Barrow using C-BRW1, U-SG27 GPS units.
- Mike Wussow arrived in Deadhorse today! Welcome back!
- Matt Devoe is scheduled to arrive tomorrow
- Ivana Vu will depart D18 tomorrow and join Payload 3 in D16
- The flight crew crossed paths with Michael Eastwood in Barrow. Michael Works for JPL and was in town flying using AVIRIS-Next Generation for NASA’s ABoVE project. Michael played a major role in building our NIS systems and was really excited to see the payload again!

## Flight Screenshots

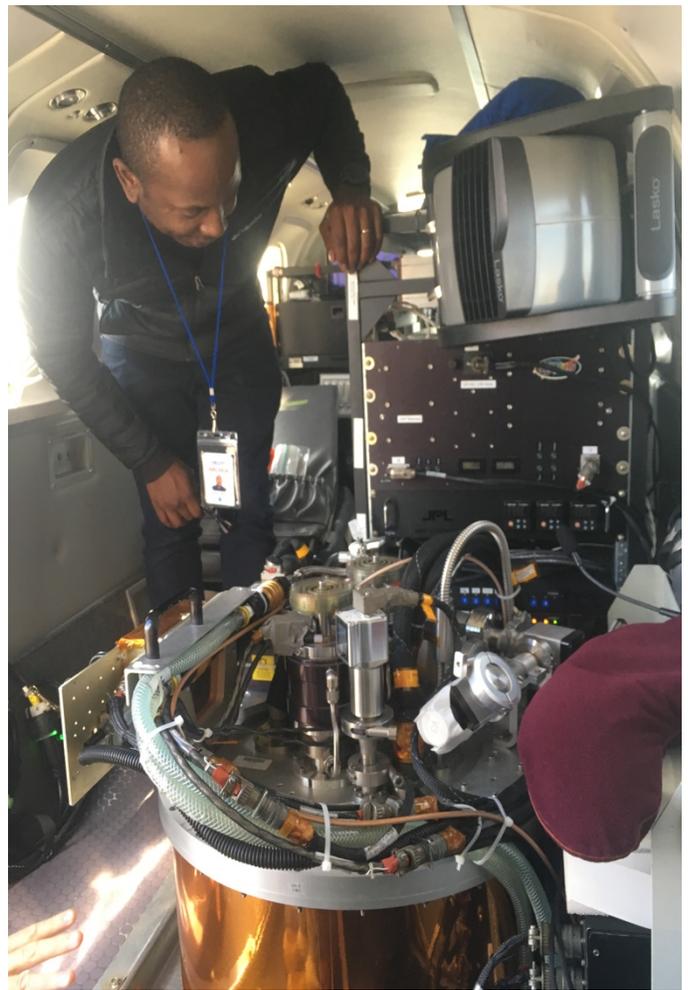
### LiDAR



### NIS



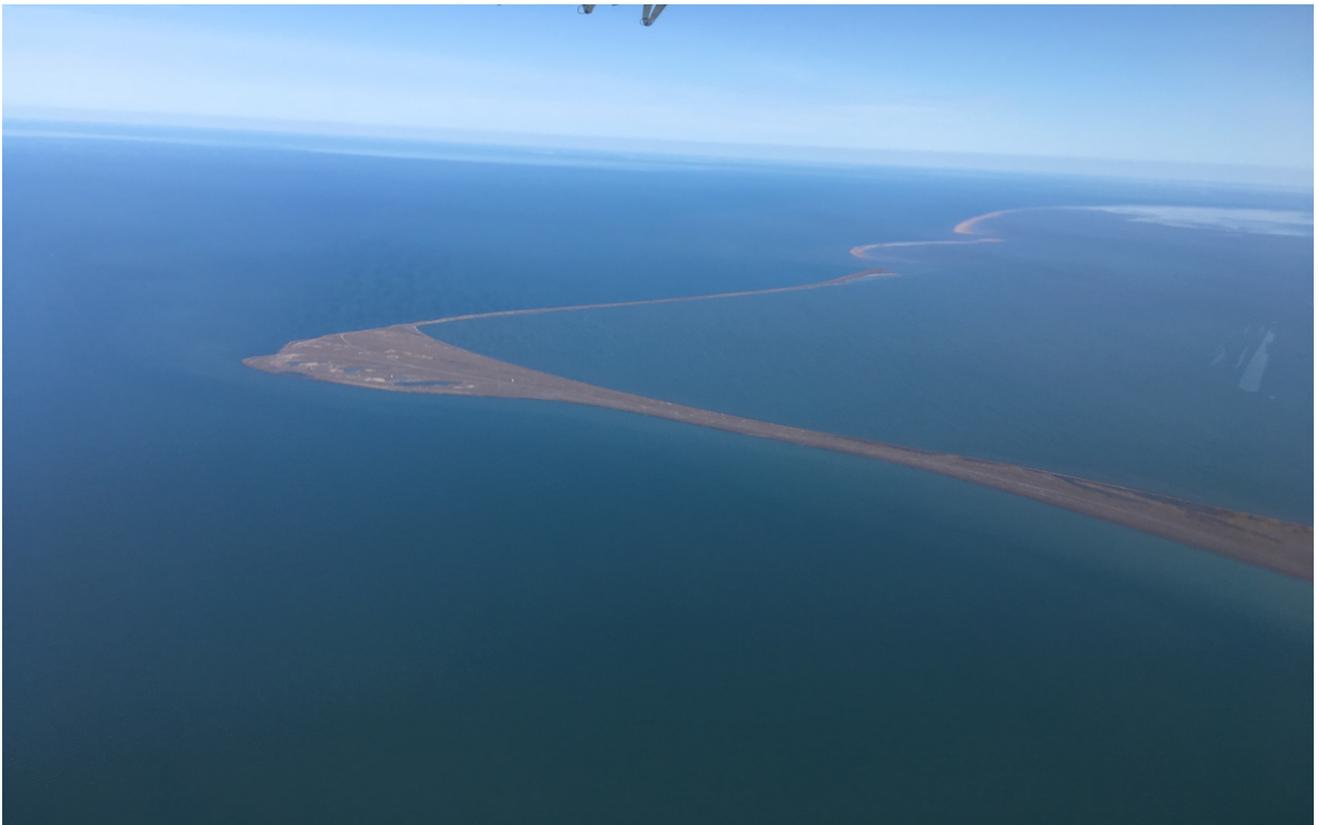
## Pictures



Above: Cameron and Ivana tour NASA / JPL's ABoVE Aircraft!



**Above: The crew poses with JPL's Michael Eastwood**  
**Below: The Alaskan coastline as seen near Barrow**





Above: The most northern city in the USA! Barrow!

**Daily Coverage**

D18 BARR_P1	Line	SpecG	SpecY	SpecR	NIS	Lidar	Camera	Cumulative
	1				✓	✓	✓	NLC
	26				✓	✓	✓	NLC
	27				✓	✓	✓	NLC
	28				✓	✓	✓	NLC
	29				✓	✓	✓	NLC
	30				✓	✓	✓	NLC
	31				✓	✓	✓	NLC
	32				✓	✓	✓	NLC
	33				✓	✓	✓	NLC
	34				✓	✓	✓	NLC
	35				✓	✓	✓	NLC
Flown:	11							

## Cumulative Domain Coverage

### BARR\_P1

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35						

Flown: 31% (11/35)

Green: 0% (0/35)

Yellow: 31% (11/35)

Red: 0% (0/35)

### BARR\_P2

36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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Flown: 0% (0/15)

Green: 0% (0/15)

Yellow: 0% (0/15)

Red: 0% (0/15)

### N18A

1
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Flown: 0% (0/1)

Green: 0% (0/1)

Yellow: 0% (0/1)

Red: 0% (0/1)

### TOOL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48												

Flown: 0% (0/48)

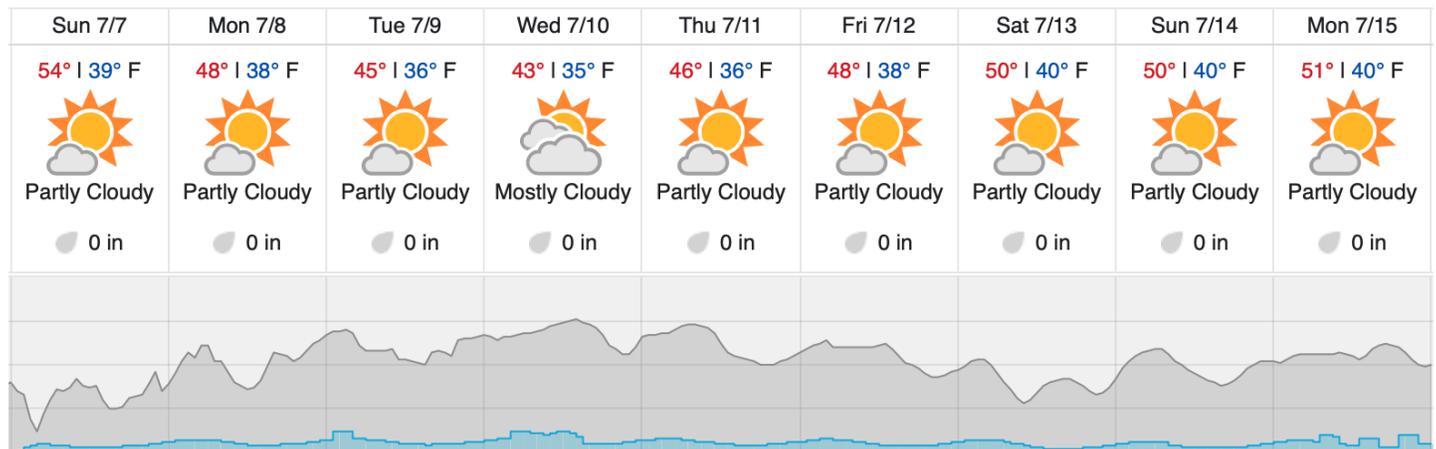
Green: 0% (0/48)

Yellow: 0% (0/48)

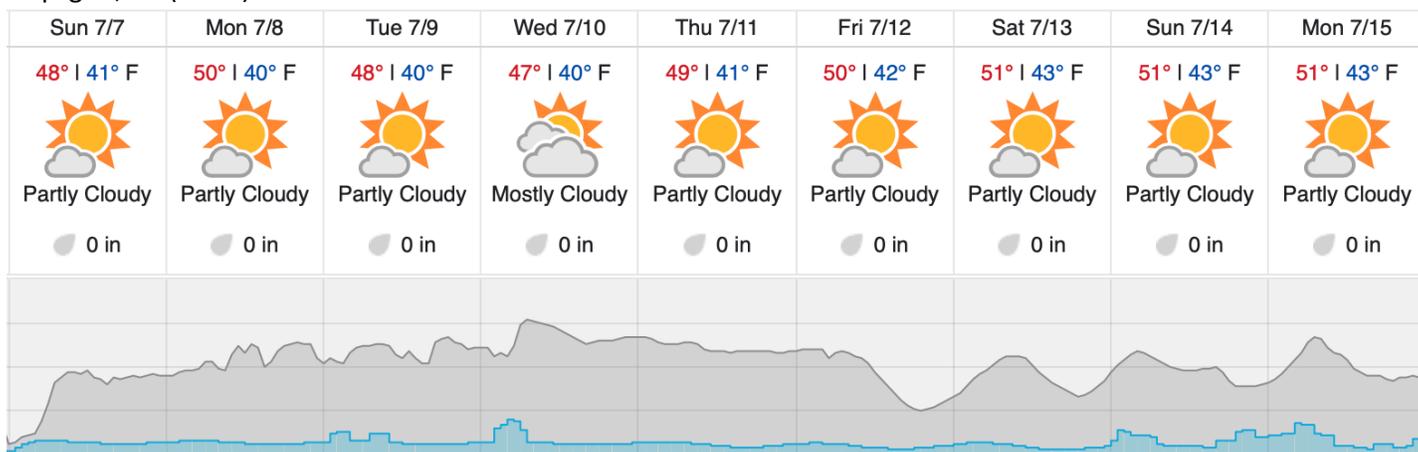
Red: 0% (0/48)

## Weather Forecast

Prudhoe Bay, AK (TOOL)



Utqiagvik, AK (BARR)



**Flight Collection Plan for 07 July 2019**

**Flyority 1:**

Collection Area: Toolik (TOOL)

Flight Plan Name: D18\_TOOL\_C1\_P1\_v1.pln

On-station Time: 1840 – 0120 UTC / 1040 – 1720 L (35° solar angle)

**Flyority 2:**

Collection Area: Barrow Environmental Observatory (BARR) - Priority 1 Flight Box

Flight Plan Name: D18\_BARR\_R1\_P1\_P2\_P3\_v4.pln

On-station Time: 1930 – 0130 UTC / 1130 – 1730 L (35° solar angle)

**Flyority 3:**

Collection Area: Barrow Environmental Observatory (BARR) - Priority 2 Flight Box

Flight Plan Name: D18\_BARR\_R1\_P1\_P2\_P3\_v4.pln

On-station time: 1930 – 0130 UTC / 1130 – 1730 L (35° solar angle)

**Flyority 4**

Collection Area: Barrow Environmental Observatory (BARR) - Priority 3 Flight Box

Flight Plan Name: D18\_BARR\_R1\_P1\_P2\_P3\_v4.pln

On-station time: 1930 – 0130 UTC / 1130 – 1730 L (35° solar angle)

**Flyority 5**

Collection Area: Barrow Environmental Observatory (BARR) - Priority 1 Flight Box – 750m AGL Initial Collect

Flight Plan Name: D18\_BARR\_R1\_P1\_v3b\_760m\_AGL.pln (use only if cloud heights do not permit flights at 1000m AG)

On-station time: 1930 – 0130 UTC / 1130 – 1730 L (35° solar angle)

**Flyority 6**

Collection Area: Nominal Runway – D18

Flight Plan Name: D18\_N18A\_Nominal\_Runway\_Test\_v1.pln

On-station time: N/A

**Crew:** Cameron Chapman (Lidar), Ivana Vu (NIS) Mike Wussow (Ground/ GPS)

**Flight Collection Plan for 08 July 2019**

**Flyority 1-6:** Same as previously briefed

**Crew:** Mike Wussow (Lidar), Matt Devoe (NIS)