July 10, 2018 Payload 2 Daily Flight Report

Date: 2018-07-10
Flight Campaign ID: 2018_P2C1
Airport, FBO ID, City: Wiley Post-Will Rogers Memorial (PABR) - Barrow, AK

Domain: 18
Sites Flown: BARR_P1 (Barrow Environmental Observatory Priority 1), BARR_P2 (Barrow Environmental Observatory Priority 2)
Days left in Domain: 15

Report Author: Ivana Vu
Flight Crew: Ivana Vu, Michael Wussow
Ground/GPS: Abe Morrison
Pilots: Gian Carey, Hans Germann
Additional Personnel: None
GPS Instruments: 02 - FBO_PASC, C-BRW1

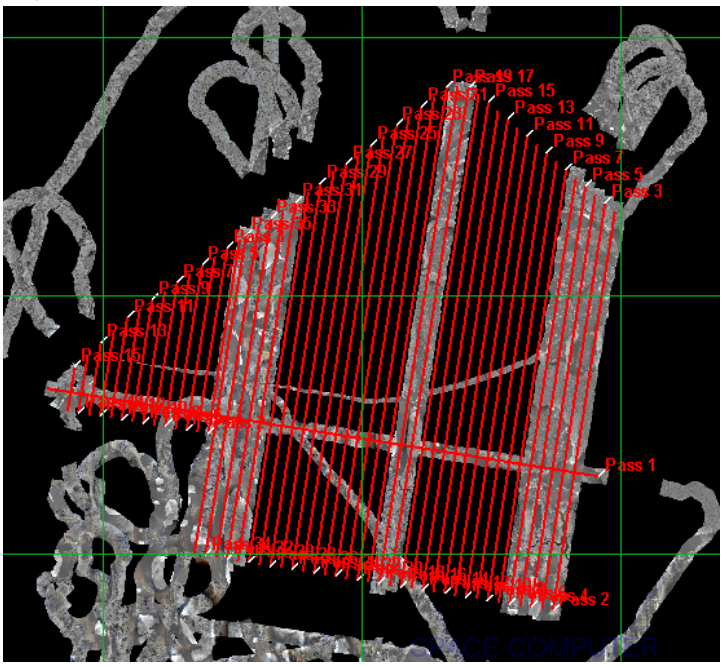
Flight Hours: 03:11, 01:33, 01:14
Hours until maintenance: 87.32

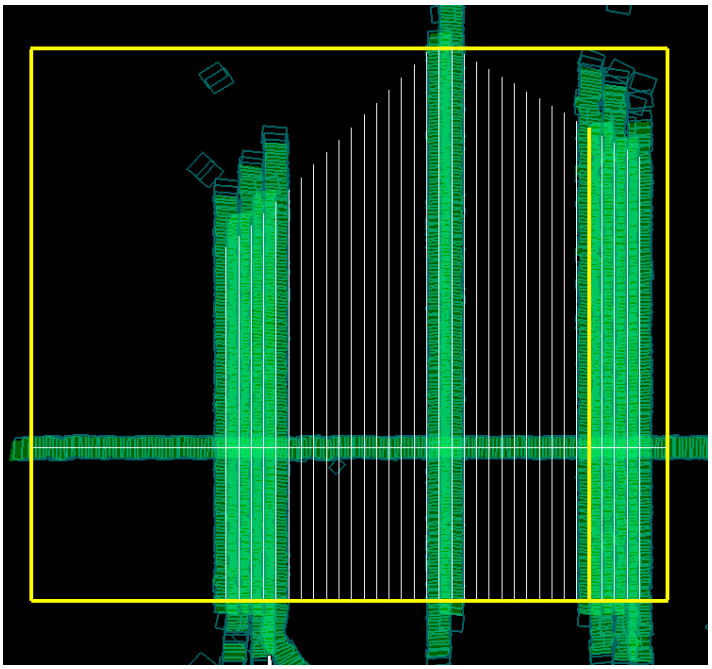
Summary
Higher priority TOOL site had overcast clouds while Barrow webcams appeared clearer than they have been since we arrived in Deadhorse. Thirteen lines were completed under mixed sky conditions at BARR until low cumulus clouds and an instrumentation issue prevented further collects. Two fuel stops were made at the airport in Barrow and a NEON staff member joined us for an AOP tour.

Concerns
Hotel Kit D Drive is currently full and a temporary workaround is being used until we receive confirmation to free up more disk space.

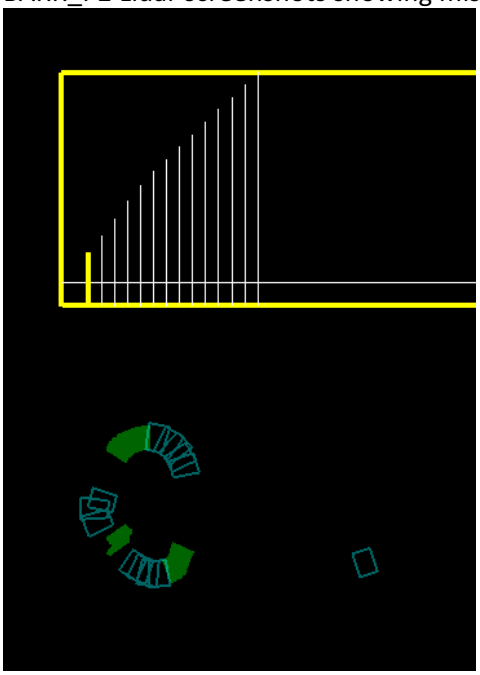
Comments
- PABR is a viable fuel stop with shore power and a GPU available for our use
- Rachel Pernick, D18 field staff based in Barrow, visited us during our last fuel stop

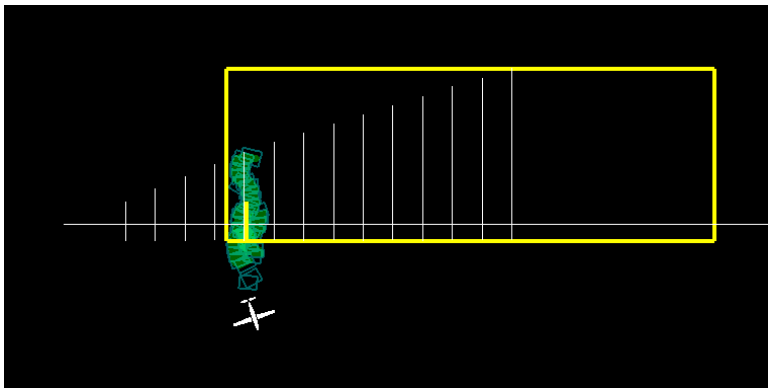
Flight Screenshots





BARR_P2 Lidar screenshots showing misaligned Nav data and lag issue

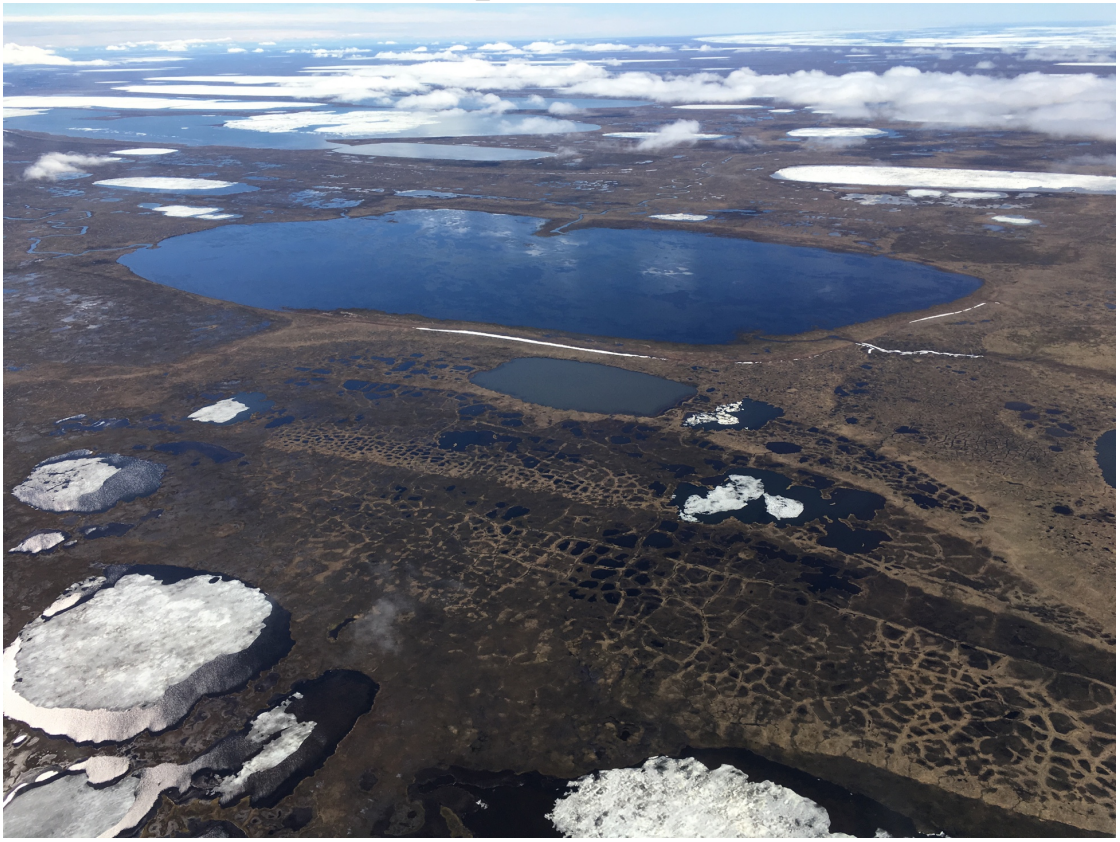




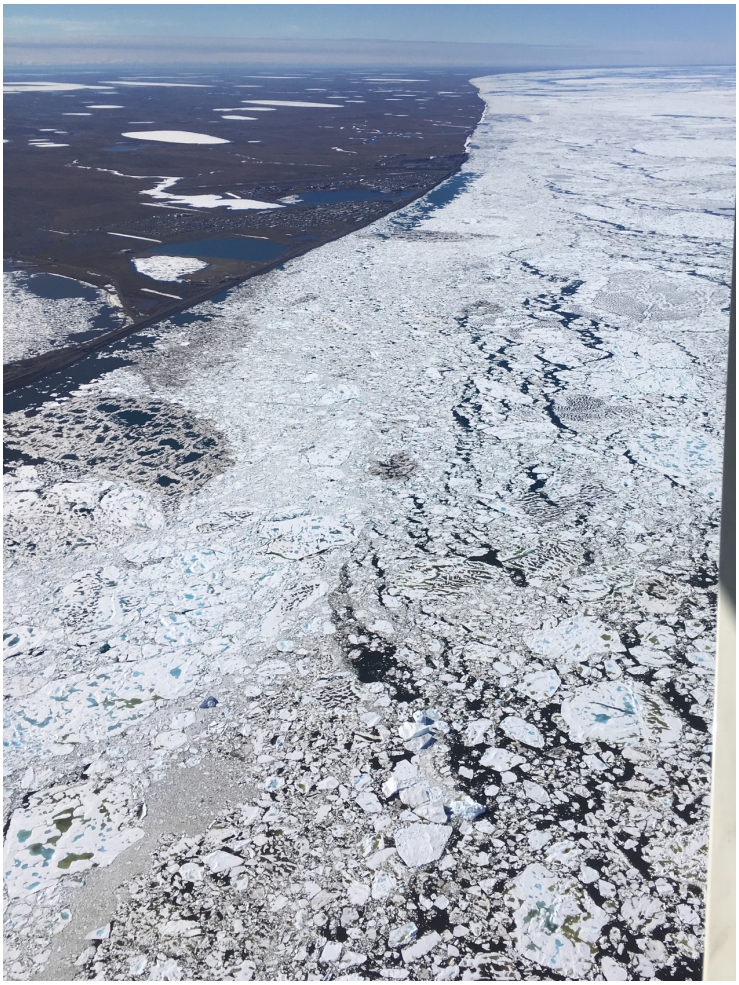
Pictures

Many thanks to Rachel for visiting us at the airport and giving us a tour of Barrow (the northernmost city in the US)

Low cumulus clouds move in over BARR_P1



The Arctic Ocean, sea ice, and BARR_P2 site which includes the airport and town of Barrow



Daily Coverage

D18|BARR_P1	Line	SpecG	SpecY	SpecR	NIS	Lidar	Camera	Cumulative
	1				✓	✕	✓	NC
	2				✓	✓	✓	NLC
	3				✓	✓	✓	NLC
	4				✓	✓	✓	NLC
	5				✓	✓	✓	NLC
	6				✓	✓	✓	NLC
	17				✓	✓	✓	NLC
	18				✓	✓	✓	NLC
	31				✓	✓	✓	NLC
	32				✓	✓	✕	NL
	33				✓	✓	✓	NLC
	34				✓	✓	✓	NLC
	35				✓	✓	✓	NLC
Flown:	13							
D18|BARR_P2	Line	SpecG	SpecY	SpecR	NIS	Lidar	Camera	Cumulative
	15				✕	✕	✕	
Flown:	1							

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: 37% (13/35)
Green: 9% (3/35)
Yellow: 29% (10/35)
Red: 0% (0/35)

BARR_P2

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Flown: 0% (0/15)
Green: 0% (0/15)
Yellow: 0% (0/15)
Red: 0% (0/15)

N18A

1

Flown: 0% (0/1)
Green: 0% (0/1)
Yellow: 0% (0/1)
Red: 0% (0/1)

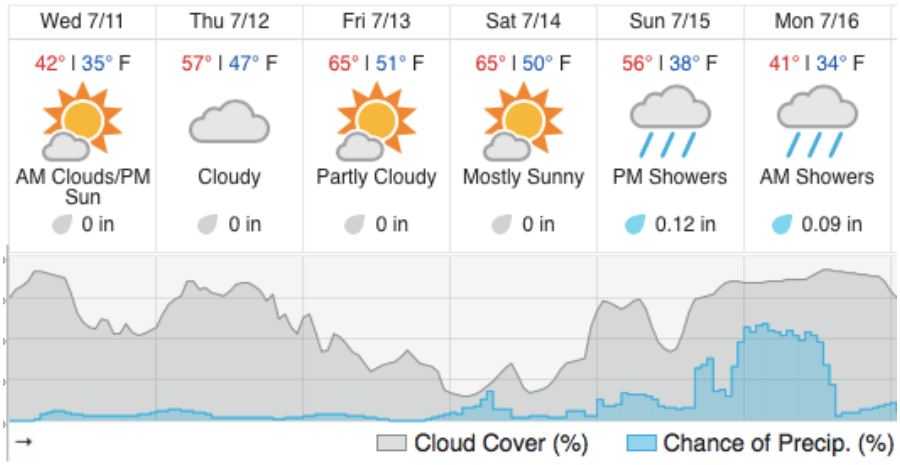
TOOL

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												

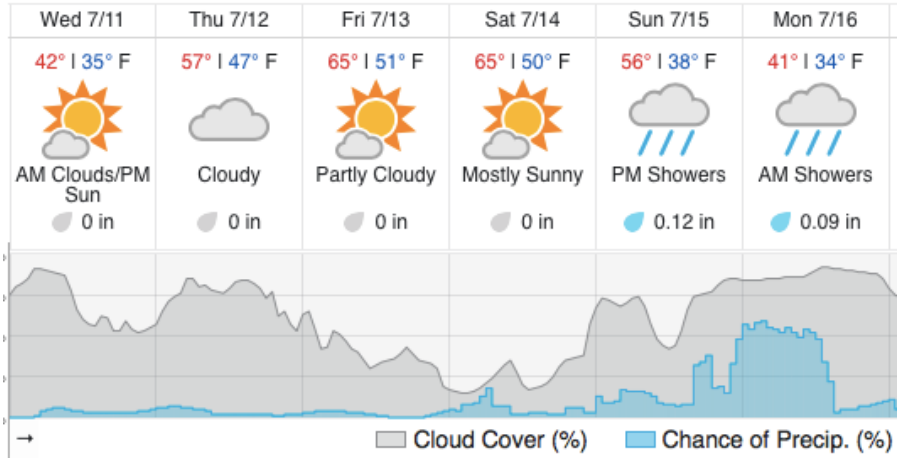
Flown: 31% (15/48)
Green: 0% (0/48)
Yellow: 0% (0/48)
Red: 31% (15/48)

Weather Forecast

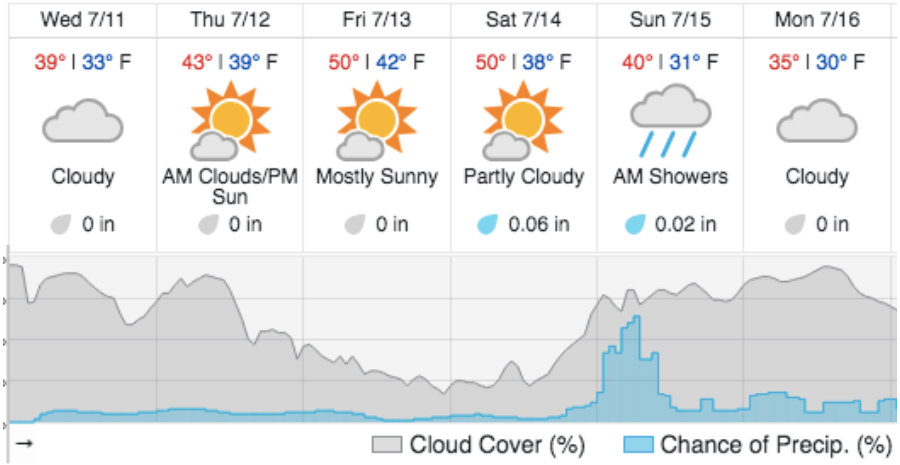
Prudhoe Bay, AK (FBO)



Galbraith Lake, AK (TOOL)



Barrow, AK (BARR)



Flight Collection Plan for 11 July 2018

Flyority 1:
Collection Area: Toolik (TOOL)
Flight Plan Name: D18_TOOL_C1_P1_v1.pln
On-station Time: 1850 UTC / 1050 L

Flyority 2:
Collection Area: Barrow Environmental Observatory – Priority 1 Flight Box (BARR_P1)
Flight Plan Name: D18_BARR_R1_P1_v3.pln
On-station Time: 1940 UTC / 1140 L

Flyority 3:
Collection Area: Barrow Environmental Observatory – Priority 2 Flight Box (BARR_P2)
Flight Plan Name: D18_BARR_R1_P2_v3.pln
On-station Time: 1940 UTC / 1140 L

Crew: Abe Morrison (Lidar), Ivana Vu (NIS), Mike Wussow (GPS/Ground)

Flight Collection Plan for 12 July 2018

Same as previous day

Crew: Mike Wussow (Lidar), Abe Morrison (NIS), Ivana Vu (GPS/Ground)

New Issues

Fault: Camera	**Open Date**: 2018-07-10
D-Ops software crashed once in-flight	
Fault: Displays, Lidar	**Open Date**: 2018-07-10
Pilot display experienced significant lag during flight, making it impossible for pilots to stay on a line. ALTM-NAV showed "Nav data lost" error and Plan Progress window also showed signs of lag. This continued after in-flight restart of ALTM-NAV. After landing, a full lidar system restart was conducted and seemed to resolve the issue.	