

Payload 3 Daily Flight Report



Date: 2021-03-25 Flight Campaign ID: P3C1 Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO Aircraft: N615AR

Domain: 00 (Training & Calibration) Sites Flown: Training Days left in Domain: 4

Report Author: John Adler Lidar Operators: John / Mike / Robb Spectrometer Operators: Robb / Robb / Mike Pilots: Justin Eddington, Micah Hoogeveen Adt'l Flight Crew: Ivana Vu, Matt Devoe

Flight Hours: 00:53, 01:10, 00:56 Hours until maintenance: 115.90 GPS Instruments: AOP_KBDU Ground Crew: Mike / Ivana / John

Summary

The weather was not conducive to calibration flights today, nor was the snow cleared from Greeley. Instead, three training flights were conducted, resulting in Robb, Mike, and John completing their annual Reigl lidar, NIS, and Ground training.

Concerns

- The camera was successfully taking pictures, but the images were not showing up during the first two flights via the VNC software. During the third flight thumbnails were viewable until start of first line, then white screen in CameraMain VNC. Remote desktop into CameraMain was unsuccessful and then could not log back into CameraMain VNC. Photos were still being taken and placed in folder on MIDAS1.
- At end of third flight POS was not copying to Midas1 drive and had to be copied directly from MIDAS computer to thumbdrive to transfer to MIDAS1 disk.

Comments

- On second flight NIS GPS was misaligned and required a NIS reboot and an in-air alignment to resolve.
- During system start-up for flight 3 of the day, 2021032519, the NIS-3 focal plane was not communicating with the DCC and a black FPA window was seen as well as a "framegrabber" error in the log console in the DCC Mars Rover software. This has been seen during previous campaigns and was resolved by cycling power on the FPIE box located on the PIM. This issue will be noted in the pass-down log with more specific troubleshooting instructions for future reference.

Daily Coverage

Estimated Cloud Cover Key
Green: Yellow: Red:

0-10% 11-50% >50%

D00|W10C

Line # 1

Lidar	\checkmark
Spectrometer	\checkmark
Camera	\checkmark
Cloud Cover	

Total number of lines flown: 1 (4 passes)

Flight Screenshots



Cumulative Domain Coverage

D00|B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Flown: 0% (0/20) Green: 0% (0/20) Yellow: 0% (0/20) Red: 0% (0/20)

D00 | H10C (NEON Headquarters Lidar Test - Riegl)

1 2 3 4

Flown: 100% (4/4) Green: 0% (0/4) Yellow: 0% (0/4) Red: 100% (4/4)

D00 | N10D (Nominal Runway at KBDU - Riegl)

2 3 4 5 6 8 9 10 11 12 13 14 15 19 20 1 7 16 17 18 26 27 21 22 23 24 25 28 Flown: 86% (24/28)

Green: 46% (13/28) Yellow: 0% (0/28) Red: 39% (11/28)

D00|O10B (NIS Offset - Riegl) 1 2 Flown: 0% (0/2)

Green: 0% (0/2) Yellow: 0% (0/2) Red: 0% (0/2)

D00 | R10C (Table Mountain Radiometric Calibration - Riegl)

 1
 2
 3
 4
 5

 Flown:
 0% (0/5)

 Green:
 0% (0/5)

 Yellow:
 0% (0/5)

 Red:
 0% (0/5)

D00 V10C (Boulder City South)

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											
Flown: 10% (3/29) Green: 0% (0/29) Yellow: 0% (0/29)																			
Red: 2	Red: 10% (3/29)																		

D00 | W10C (Wiggle Timing Test - Riegl)

1 2

Flown: 100% (2/2) Green: 100% (2/2) Yellow: 0% (0/2) Red: 0% (0/2)

Weather Forecast

	Thu 3/25	Fri 3/26	Sat 3/27	Sun 3/28	Mon 3/29	Tue 3/30	Wed 3/31	Thu 4/1	
	I 32°F	45° 30°F	48° 33°F	<mark>61°</mark> I 40°F	67° 30°F	38° 24°F	47° 27°F	59° 36°F	
<	///*		*	*		***	*	*	
	Rain/Snow	PM Rain	Mostly Sunny	Sunny	Sunny	Snow Showers	Mostly Sunny	Sunny	
	Showers Early								
	🥑 0.02 in	*1 PM	🖉 0 in	🖉 0 in	🗱 in	🗱 1.4 in	🖉 0 in	🖉 0 in	
100%	• •		• •	• •		• •	• •	• •	
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25%	\sim	29.75	in						
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0%									
	Cloud Cover (%)	Chance	of Precip. (%)						

source: wunderground.com

Flight Collection Plan for 26 March 2021

Flyority 1 Collection Area: Table Mountain Radiometric Calibration – Boulder Airport Flight Plan Name: D10_R10C_Rad_Cal_TBMT_v1_Q780 On-station Time: 1700 UTC / 1100 L Additional Considerations: Ground should be dry. Flyority 2 Collection Area: Boresight Calibration – Greeley, CO Flight Plan Name: D10_B10E_Boresight_1600m_Q780 On-station Time: 1600 UTC / 1000 L Additional Considerations: No recent snowfall, clear roofs required.

Flyority 3 Collection Area: NIS Offset Flight Flight Plan Name: D10_O10B_NIS_Offset_v2_Q780 On-station Time: 1630 UTC / 1030 L

Flight Crew: Matt & John (lidar), Robb (NIS), Mike (Ground)