

Payload 1 Daily Flight Report



Date: 2024-05-05

Flight Campaign ID: P1C1

Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: CPER (Central Plains Ecological Range) – Waveform Digitizer Test Flight

Days left in Domain: 7

Report Author: Mike

Lidar Operators: Mike **Flight Hours**: 03:25

Spectrometer Operators: N/A Hours until maintenance: 110.33

Pilots: Jeff, Shane **GPS Instruments**: AOP_CPER, AOP_KBDU

Ground Crew: Elissa

Summary

A successful lidar/digitizer test flight was conducted today. The full CPER site was flown using the maximum (1000) PRF settings for the Galaxy system. No issues with the lidar system were experienced during the flight.

Concerns

The NIS was booted on the ground with the intention of leaving it idle during the flight to see if errors occurred, regardless of if data was collected. When checking the system shortly after takeoff, the NIS was already experiencing the framegrabber error and was promptly shutdown for the rest of the flight.

Comments

Mike departs Boulder tomorrow.

Daily Coverage

Estimated Cloud Cover Key

Green:	Yellow:	Red:
0-10%	11-50%	>50%

Solar Angle Less Than 40 degrees

Line#

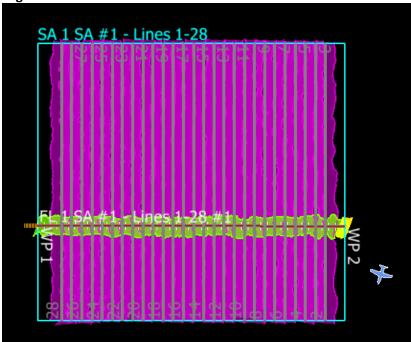
D00 | CPER

Line #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Lidar	✓	√	✓	√	✓	✓	√	✓	✓	√	✓	✓	✓	✓	✓	✓	✓	√	✓	✓
Spectrometer																				
Camera	✓	√	√	√	✓	✓	√	√	√	✓	✓	✓	✓	✓	✓	✓	✓	√	✓	✓
Cloud Cover																				

Line #	22	23	24	25	26	27	28
Lidar	✓	✓	✓	✓	✓	✓	✓
Spectrometer							
Camera	✓	✓	✓	✓	✓	✓	✓
Cloud Cover							

Total number of lines flown: 28

Flight Screenshots



Pictures



Bluffs of the Pawnee National Grassland northeast of CPER

Cumulative Domain Coverage

D00 B10F (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 550m - Galaxy)

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

Flown: 100% (20/20) Green: 10% (2/20) Yellow: 90% (18/20) Red: 0% (0/20)

D00 | BLKF (Black Forest Waveform Range Test - Galaxy)

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

21

Flown: 0% (0/21) Green: 0% (0/21) Yellow: 0% (0/21) Red: 0% (0/21)

D00 | CPER (Central Plains Ecological Range)

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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												

Flown: 100% (28/28) Green: 0% (0/28) Yellow: 0% (0/28) Red: 100% (28/28)

D00 H10D (NEON Headquarters Lidar Validation - Galaxy)

1 2 3 4

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

D00 | N10F (Nominal Runway at KBDU - Galaxy)

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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					

Flown: 100% (37/37) Green: 0% (0/37) Yellow: 43% (16/37) Red: 57% (19/37)

D00 | O10C (NIS Offset - Galaxy)

1 2

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

D00 | R10E (Table Mountain Radiometric Calibration - Galaxy)

1 2 3 4 5

Flown: 0% (0/5) Green: 0% (0/5) Yellow: 0% (0/5) Red: 0% (0/5)

D00 V10F (Boulder City Nominal - Galaxy)

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											

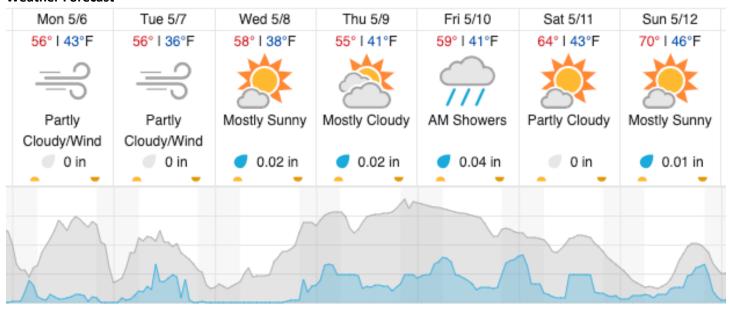
Flown: 38% (11/29) Green: 0% (0/29) Yellow: 0% (0/29) Red: 38% (11/29)

D00 | W10D (Wiggle Timing Test - Galaxy)

1 2

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

Weather Forecast



source: wunderground.com

Cloud Cover (%)

Flight Collection Plan for 6 May 2024

Priority: NIS Troubleshooting and Digitizer Data Evaluation

Chance of Precip. (%)

Flyority 1

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10_R10E_Radiometric_Cal_Table_Mtn_v2_PRM.xml

45° On-station Time: 16:10 UTC / 09:10 L

Additional Considerations: Ground should be dry.

Flyority 2

Collection Area: Black Forest Waveform Range Test Flight Flight Plan Name: D10_BLKF_Black_Forest_v4_PRM.xml On-Station Time: Daylight – No solar angle restrictions.

Flyority 3

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10C_NIS_Offset_v3_PRM.xml

35° On-station Time: 15:20 UTC / 08:20

Flight Crew

TBD