



Payload 1 Daily Flight Report



Date: 2024-05-01

Flight Campaign ID: P1C1

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

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: W10D (Wiggle Timing Test - Galaxy), H10D (NEON Headquarters Lidar Validation - Galaxy)

Days left in Domain: 11

Report Author: Elissa

Lidar Operators: Elissa

Flight Hours: 00:56

Spectrometer Operators: Abe

Hours until maintenance: 121.17

Pilots: Jeff, Shane

GPS Instruments: AOP_KBDU

Ground Crew: John

Summary

A short window in the weather this morning allowed for collection of the HQ Lidar Validation and Wiggle Timing Test flight plans. No issues were observed during operations.

Concerns

None.

Comments

- All three display ammeters are out on the AXE. The lab is currently developing possible solutions as they continue work on the other new AXEs.
- Bridget started evaluating today's data immediately after extraction, which should tell us whether the lidar is good to go for longer flight plans.

Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees

Line #

D00|H10D

Line #	1	2	3	4
Lidar	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓
Camera	✓	✓	✓	✓
Cloud Cover				

Total number of lines flown: 4

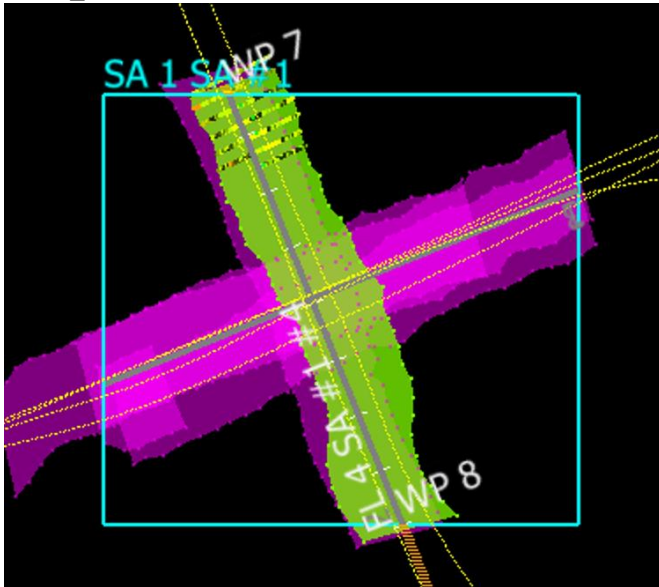
D00|W10D

Line #	1	2
Lidar	✓	✓
Spectrometer	✓	✓
Camera	✓	✓
Cloud Cover	■	■

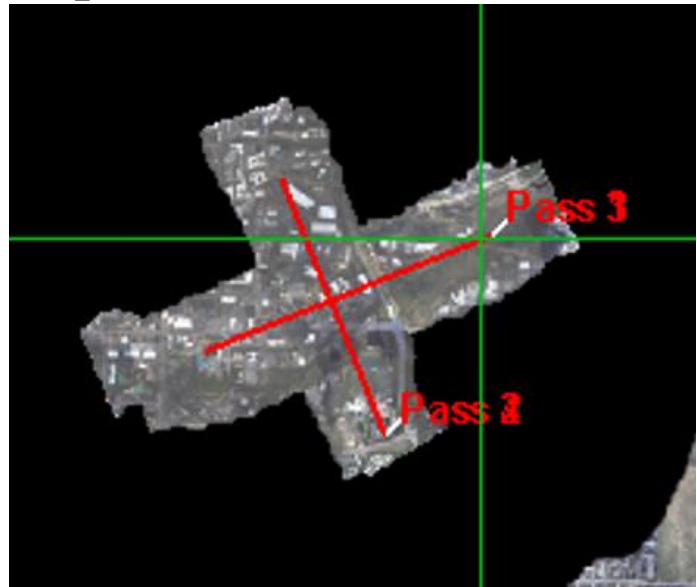
Total number of lines flown: 2

Flight Screenshots

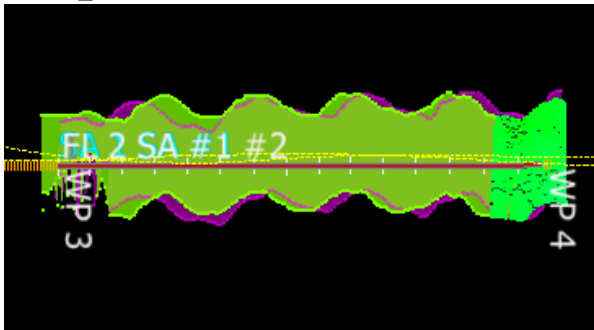
H10D_Lidar



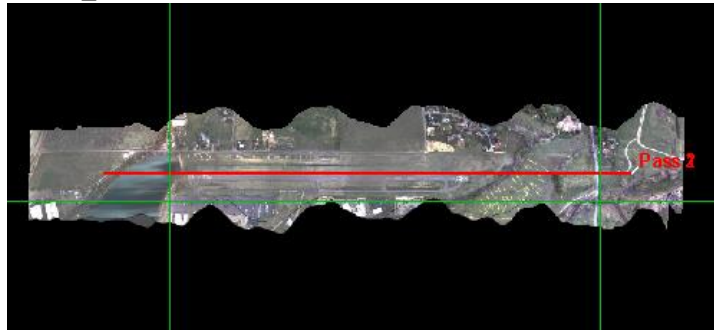
H10D_NIS



W10D_Lidar



W10D_NIS



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: 0% (0/20)

Green: 0% (0/20)

Yellow: 0% (0/20)

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
21																			

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

D00|CPER (Central Plains Ecological Range)

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

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)

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: 8% (3/37)
Green: 0% (0/37)
Yellow: 0% (0/37)
Red: 8% (3/37)

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: 0% (0/29)
Green: 0% (0/29)
Yellow: 0% (0/29)
Red: 0% (0/29)

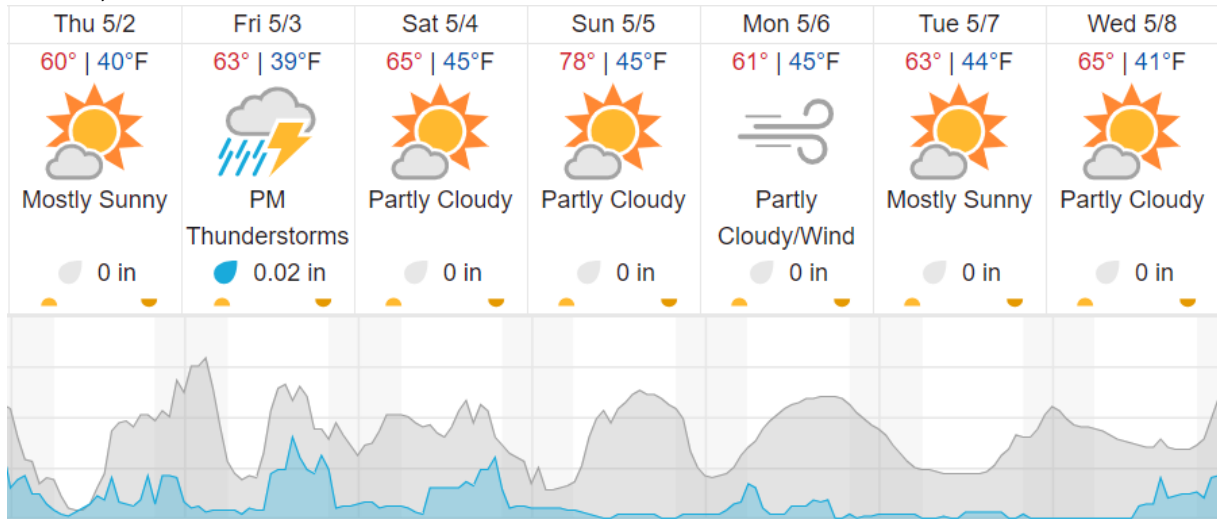
D00|W10D (Wiggle Timing Test - Galaxy)

1 2

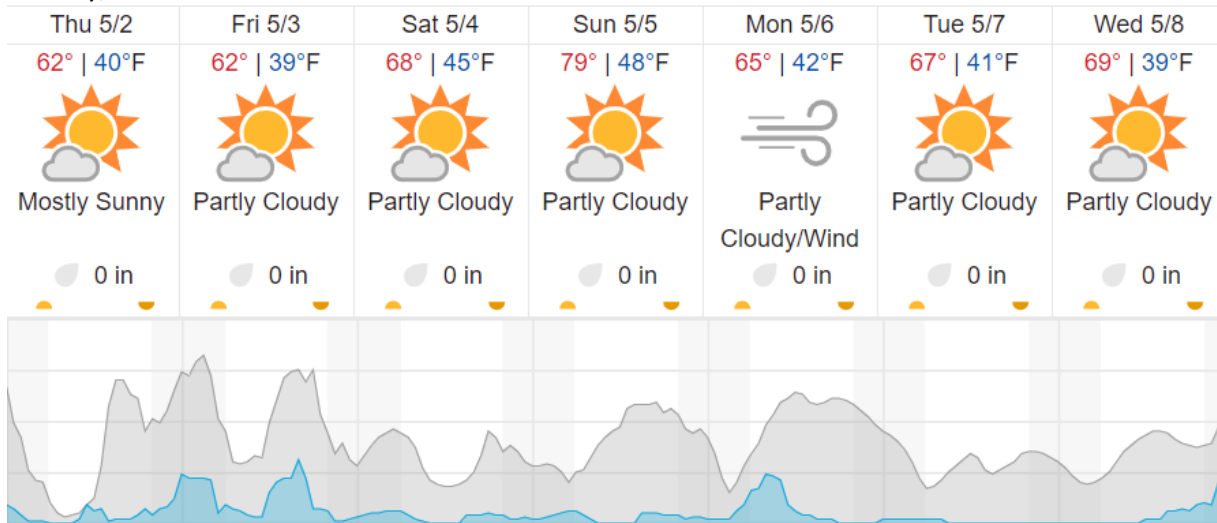
Flown: 100% (2/2)
 Green: 0% (0/2)
 Yellow: 100% (2/2)
 Red: 0% (0/2)

Weather Forecast

Boulder, CO



Greeley, CO



Cloud Cover (%)	Chance of Precip. (%)
-----------------	-----------------------

source: wunderground.com

Flight Collection Plan for May 2, 2024

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: Boresight Calibration – Greeley, CO

Flight Plan Name: D10_B10F_Boresight_Geocal_v10_PRM.xml

30° On-station Time: 14:50 UTC / 08:50 L

Additional Considerations: No recent snowfall, clear roofs required.

Flyority 3

Collection Area: Nominal Runway Survey

Name: D10_N10F_Nominal_Rnwy_v12_PRM.xml

On-Station Time: Daylight – No solar angle restrictions.

Additional Considerations: Runway should not be wet or snow covered.

Flyority 4

Collection Area: Central Plains Ecological Range – 1000 kHz PRF test flight

Flight Plan Name: D10_CPER_C1_P1_v7_PRM_maxPRF_test.xml

35° On-station Time: 15:20 UTC / 09:20 L

Flyority 5

Collection Area: Boulder City Nominal Science Flight – Multiple PRFs

Flight Plan Name: D10_V10F_Boulder_City_v10_PRM.xml

40° On-station Time: 15:50 UTC / 09:50 L

Flyority 6

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 7

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10C_NIS_Offset_v3_PRM.xml

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

Flight Crew

Matt (Lidar), John (NIS), Elissa/Abe (Ground)