



## Payload 2 Daily Flight Report



**Date:** 2025-05-05

**Flight Campaign ID:** P2C1

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

**Aircraft:** N615AR

**Domain:** 00 (Training & Calibration)

**Sites Flown:** N10D (Nominal Runway at KBDU - Riegl), W10C (Wiggle Timing Test)

**Days left in Domain:** 16

**Report Author:** Matt

**Lidar Operators:** Matt

**Spectrometer Operators:** Nick

**Pilots:** Vince, Mac

**Flight Hours:** 01:44

**Hours until maintenance:** 117.03

**GPS Instruments:** AOP\_KBDU

### Summary

The crew managed to get airborne and complete the wiggle timing test and 6 lines of the nominal runway. All sensors triggered on time and laser swaths were observed.

### Concerns

We did encounter the laser turning off mid survey due to multiple area objects along the line. This was fixed by deleting the extra area/route objects.

### Comments

- The Lidar Auto-On has been set to semi-automatic firing in TopoNav
- The line lead in time has been set to 32000 milliseconds (not sure this is applicable when set in Semi-Auto firing mode)
- Still working through checklist workflow; we'll continue to update as applicable.
- Science team is working the new P2 extraction process.

### Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees: (\*)

D10|W10C

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

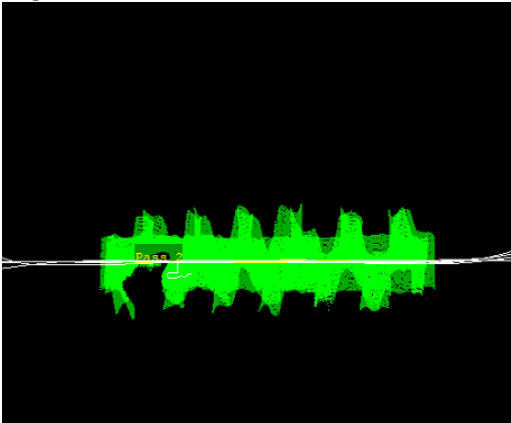
Total number of lines flown: 2

D00|N10D

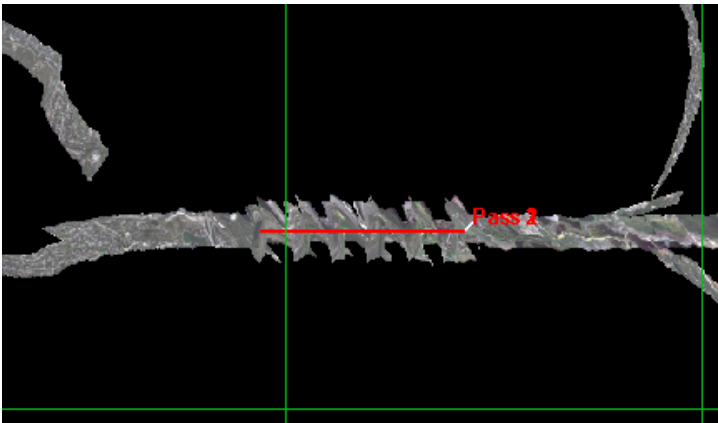
Line #	1	2	3	4	5	6	21	22
Lidar	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover								

Total number of lines flown: 8

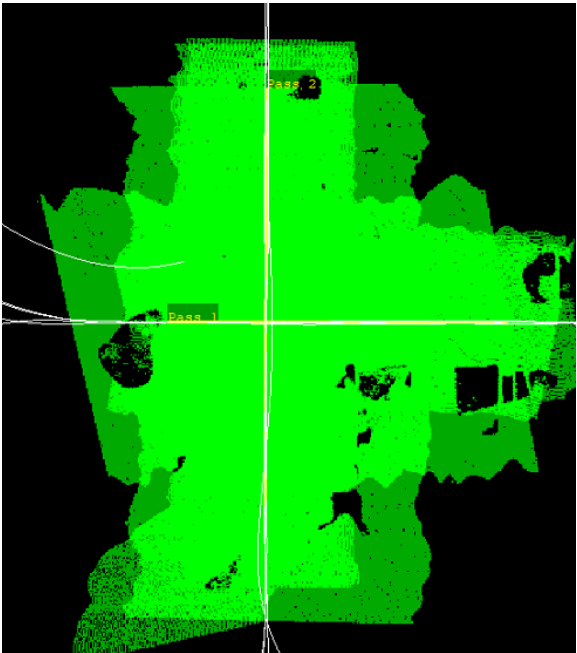
Flight Screenshots



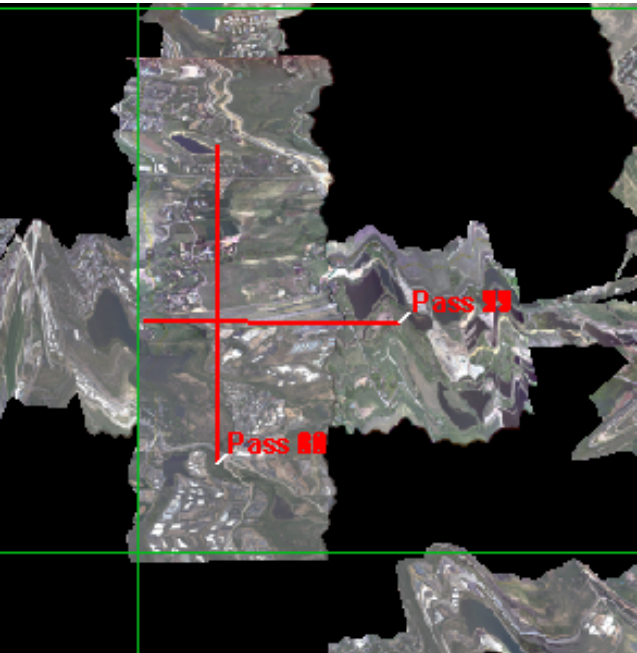
LIDAR Wiggly Timing Test



NIS



LIDAR Nominal Runway



NIS

## Cumulative Domain Coverage

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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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Flown: 0% (0/20)

Green: 0% (0/20)

Yellow: 0% (0/20)

Red: 0% (0/20)

\* Flown within 35deg solar angle

### D00|H10C (NEON Headquarters Lidar Test - Riegl)

1	2	3	4
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Flown: 0% (0/4)

Green: 0% (0/4)

Yellow: 0% (0/4)

Red: 0% (0/4)

\* Flown within 35deg solar angle

### D00|N10D (Nominal Runway at KBDU - Riegl)

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: 29% (8/28)

Green: 0% (0/28)

Yellow: 0% (0/28)

Red: 29% (8/28)

\* Flown within 35deg solar angle

### D00|O10B (NIS Offset - Riegl)

1	2
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Flown: 0% (0/2)

Green: 0% (0/2)

Yellow: 0% (0/2)

Red: 0% (0/2)

\* Flown within 35deg solar angle

### 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)

\* Flown within 35deg solar angle

### D10|ARIK (Arikaree River)

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: 0% (0/33)

Green: 0% (0/33)

Yellow: 0% (0/33)

Red: 0% (0/33)

\* Flown within 35deg solar angle

### D10|R10D (Boulder Airport Radiometric Calibration)

1	2	3	4	5
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Flown: 100% (5/5)

Green: 100% (5/5)

Yellow: 0% (0/5)

Red: 0% (0/5)

\* Flown within 35deg solar angle

#### D10|RMNP (Rocky Mountain National Park)

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	

Flown: 0% (0/39)

Green: 0% (0/39)

Yellow: 0% (0/39)

Red: 0% (0/39)

\* Flown within 35deg solar angle

#### D10|STER (Sterling Agricultural Site)

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															

Flown: 0% (0/25)

Green: 0% (0/25)

Yellow: 0% (0/25)

Red: 0% (0/25)

\* Flown within 35deg solar angle

#### D10|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																		

Flown: 5% (1/22)

Green: 0% (0/22)

Yellow: 5% (1/22)

Red: 0% (0/22)

\* Flown within 35deg solar angle

#### D10|W10C (Wiggle Timing Test - Galaxy)

1	2
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Flown: 100% (2/2)

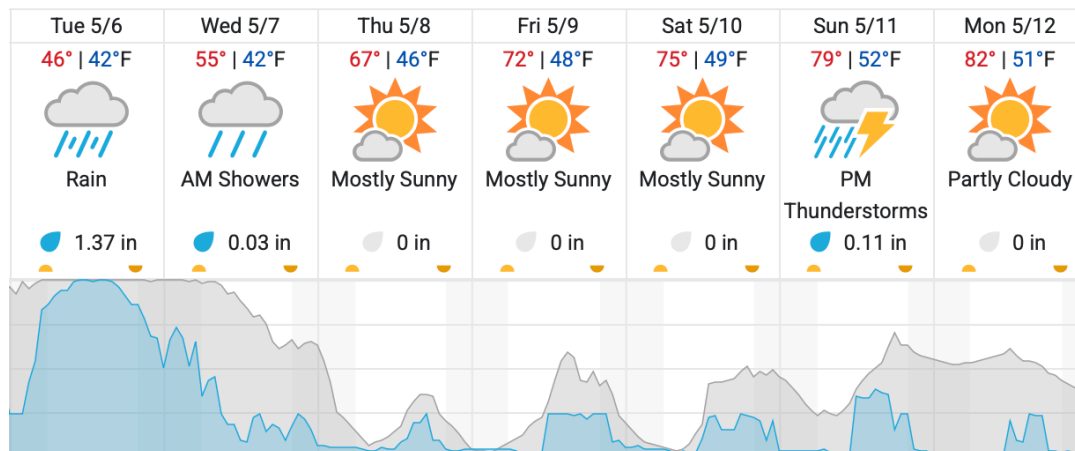
Green: 50% (1/2)

Yellow: 50% (1/2)

Red: 0% (0/2)

\* Flown within 35deg solar angle

#### Weather Forecast



Cloud Cover (%)	Chance of Precip. (%)
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source: wunderground.com

## **Flight Collection Plan for 6 May 2025**

### **Flyority 1**

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10\_R10C\_Rad\_Cal\_TBMT\_v1\_Q780

45° On-station Time: 1620 UTC / 1020 L

Additional Considerations: Ground should be dry.

### **Flyority 2**

Collection Area: Boresight Calibration – Greeley, CO

Flight Plan Name: D10\_B10E\_Boresight\_1600m\_Q780 (RiAcquire name: D10\_B10E\_Boresight\_Apx\_Q780)

30° On-station Time: 1450 UTC / 0850 L

Additional Considerations: No recent snowfall, clear roofs required.

### **Flyority 3**

Collection Area: Nominal Runway Survey Flight Plan

Name: D10\_N10D\_Nominal\_Rnwy\_v8\_Q780

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

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

### **Flyority 4**

Collection Area: NEON HQ Lidar Validation

Flight Plan Name: D10\_H10C\_HQ\_val\_v1\_Q780

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

### **Flyority 5**

Collection Area: Wiggle Timing Test

Flight Plan Name: D10\_W10C\_Wiggle\_Test\_v6\_Q780

40° On-station Time: 1550 UTC / 0950 L

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

### **Flyority 6**

Collection Area: NIS Offset Flight

Flight Plan Name: D10\_O10B\_NIS\_Offset\_v2\_Q780

35° On-station Time: 1540 UTC / 0940 L

**Crew:** Matt (Lidar), Nick (NIS)