



## Payload 3 Daily Flight Report



**Date:** 2022-04-15

**Flight Campaign ID:** P3C1

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

**Aircraft:** N70AR

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

**Sites Flown:** N10D (Nominal Runway at KBDU - Riegl)

**Days left in Domain:** 10

**Report Author:** Abe

**Lidar Operators:** Abe

**Spectrometer Operators:** Elissa

**Pilots:** Nick , Magnus

**Adt'l Flight Crew:** Cameron

**Flight Hours:** 02:19

**Hours until maintenance:** 121.58

**GPS Instruments:** AOP\_KBDU

**Ground Crew:** Mitch , Matt

### Summary

This morning started out extremely windy, but the wind died down enough for the flight crew to get in the air. The Nominal Runway calibration flight was completed which also served as the functional check flight. The system worked well, with the exception of a Midas disc issues at the end of the flight.

### Concerns

-At the conclusion of the flight while still in the air an attempt to copy the POS files to the Midas 1 disc failed with the following error message: "MIDAS SSD destination drive is no longer available, can not copy to device!". POS was successfully transferred via USB stick and the extraction was started after the flight.

-During payload start up, the new flight line electrical system's circuit breaker tripped. The breaker was quickly reset, and the gas-powered GPU was brought out to the plane as a backup. No further breaker trips occurred during the day.

### Comments

None

### Pictures



Downtown Boulder and the flatirons during today's nominal runway flight. Photo by Cameron



ASOs Abe and Elissa conduct the nominal runway flight. Photo by Cameron

## Daily Coverage

### Estimated Cloud Cover Key

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

D00|N10D

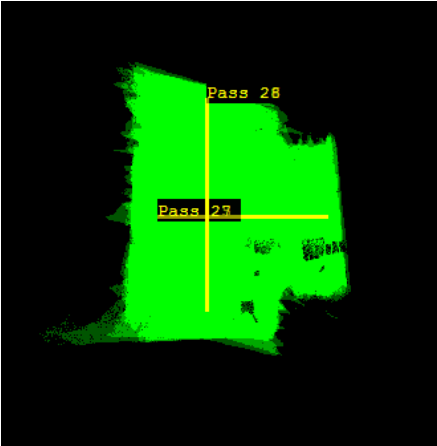
Line #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover																				

Line #	21	22	23	24
Lidar	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓
Camera	✓	✓	✓	✓
Cloud Cover				

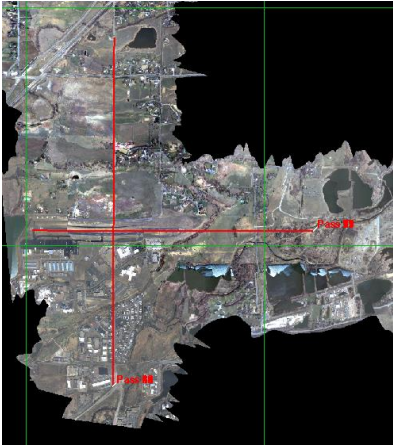
Total number of lines flown: 24

Flight Screenshots

Lidar



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)

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)

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: 86% (24/28)

Green: 0% (0/28)

Yellow: 11% (3/28)

Red: 75% (21/28)

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)

D00|R10C (Table Mountain Radiometric Calibration - Riegl)

1	2	3	4	5
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Flown: 0% (0/5)

Green: 0% (0/5)

Yellow: 0% (0/5)

Red: 0% (0/5)

## D00|W10C (Wiggle Timing Test - Riegl)

1 2

Flown: 0% (0/2)

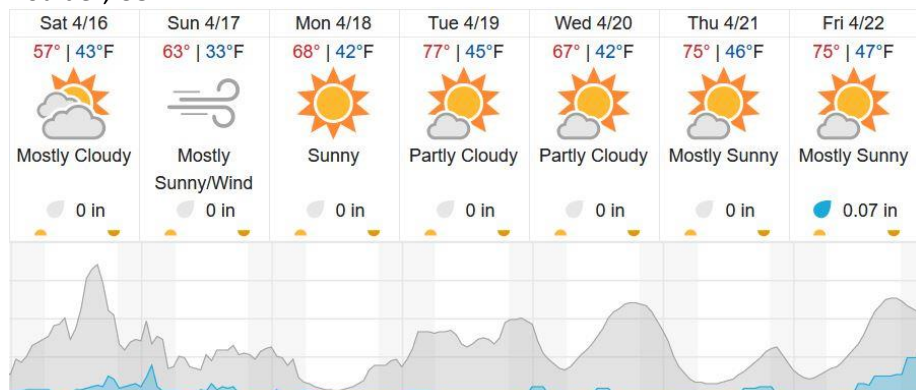
Green: 0% (0/2)

Yellow: 0% (0/2)

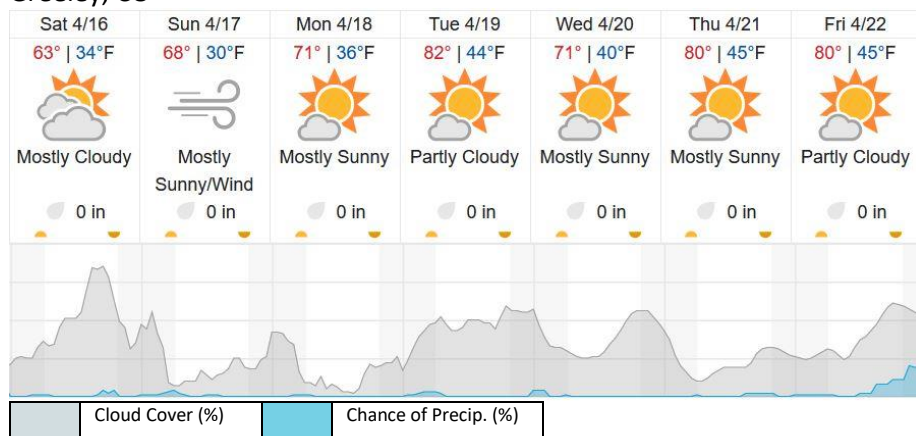
Red: 0% (0/2)

## Weather Forecast

### Boulder, CO



### Greeley, CO



source: wunderground.com

## Flight Collection Plan for 15 April 2022

### Flyority 1

Collection Area: Table Mountain Radiometric Calibration

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

45° On-station Time: 1640 UTC / 1040 L

40° On-station Time: 1610 UTC / 1010 L

Additional Considerations: Ground should be dry.

### Flyority 2

Collection Area: Boresight Calibration – Greeley, CO

Flight Plan Name: D10\_B10E\_Boresight\_1600m\_Q780

30° On-station Time: 1510 UTC / 0910 L

Additional Considerations: No recent snowfall, clear roofs required.

**Flyority 3**

Collection Area: Wiggle Timing Test

Flight Plan Name: D10\_W10C\_Wiggle\_Test\_v5\_Q780

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

**Flyority 4**

Collection Area: NEON HQ Lidar Validation

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

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

**Flyority 5**

Collection Area: NIS Offset Flight

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

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

**Flight Crew:**

16 April 2022

Matt (Lidar) Mike (NIS), Mitch (Trainer)