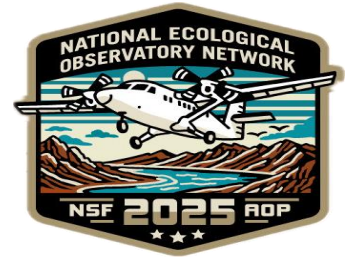




Payload 2 Daily Flight Report



Date: 2025-05-02

Flight Campaign ID: P2C1

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

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: W10C (Wiggle Timing Test - Galaxy)

Days left in Domain: 19

Report Author: Elissa

Lidar Operators: Elissa

Spectrometer Operators: Matt

Pilots: Vince, Mac

Ground Crew: Nick

Flight Hours: 00:58

Hours until maintenance: 118.77

GPS Instruments: AOP_KBDU

Summary

Another test flight was conducted over Boulder today to further troubleshoot the delayed start in laser firing/logging. That was the prime purpose of the flight and NIS and camera were not collected. Adjusting various settings in flight was not successful, but narrowed down the issue somewhat. Riegl is being contacted for support.

Concerns

- Looking at the data from the flight on 4/29/25 indicated that a substantial amount of data was indeed missing from the beginning of the flight lines (associated with the delayed start observed by operators).
- The new camera cable was installed today, but the camera is still not pulling in GPS information upon testing.

Comments

The direction of flight issue on the NIS was again tested today and is confirmed to be resolved.

Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees: (*)

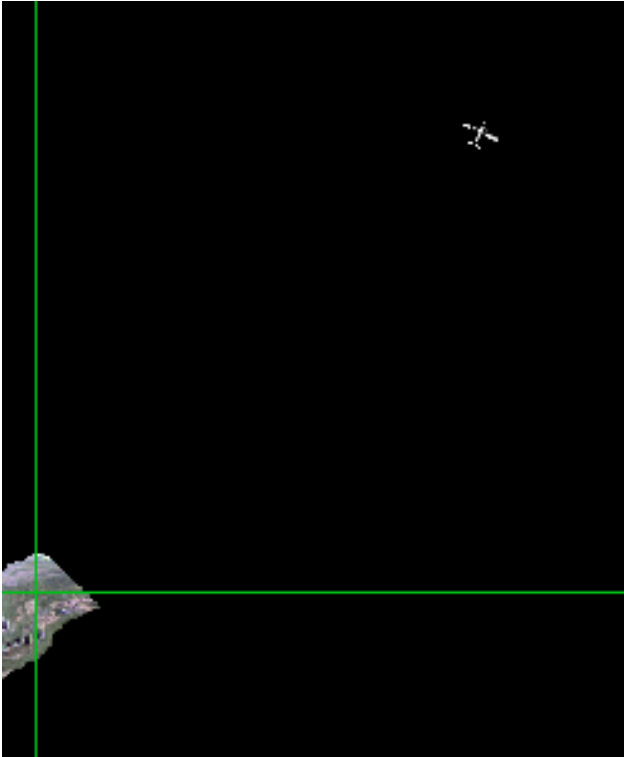
D10|W10C

| | |
|--------------|---|
| Line # | 1 |
| Lidar | ✓ |
| Spectrometer | |
| Camera | |
| Cloud Cover | |

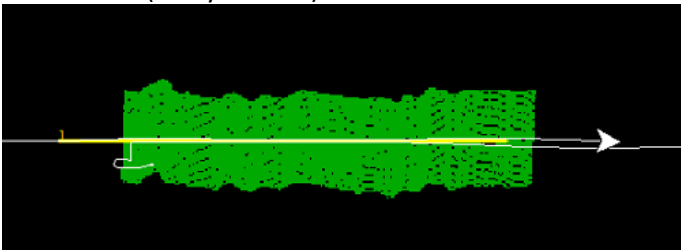
Total number of lines flown: 1

Flight Screenshots

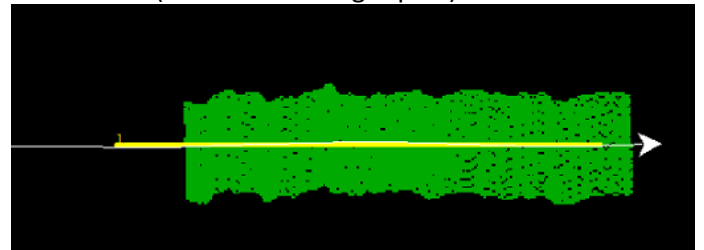
NIS (direction of flight)



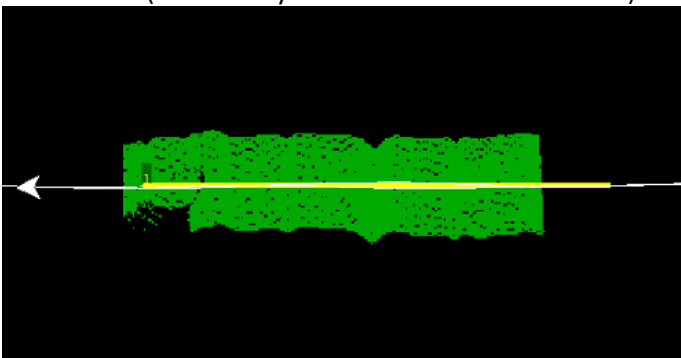
Lidar W10C (delayed start)



Lidar W10C (modified test flight plan)



Lidar W10C (same delay observed from East to West)



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 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|

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 |
|---|---|---|---|

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: 0% (0/28)

Green: 0% (0/28)

Yellow: 0% (0/28)

Red: 0% (0/28)

* Flown within 35deg solar angle

D00|O10B (NIS Offset - Riegl)

| | |
|---|---|
| 1 | 2 |
|---|---|

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 |
|---|---|---|---|---|

Flown: 100% (5/5)

Green: 100% (5/5)

Yellow: 0% (0/5)

Red: 0% (0/5)

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 |
|---|---|

Flown: 50% (1/2)

Green: 50% (1/2)

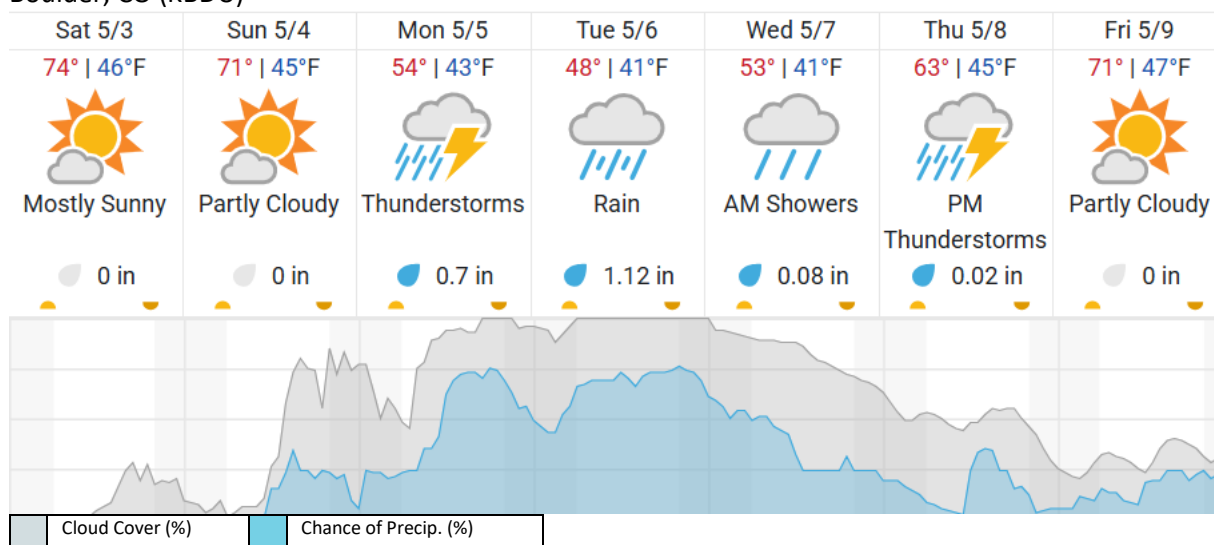
Yellow: 0% (0/2)

Red: 0% (0/2)

* Flown within 35deg solar angle

Weather Forecast

Boulder, CO (KBDU)



source: wunderground.com

Flight Collection Plan for 3 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), Elissa (NIS), Nick (Ground)