



Payload 3 Daily Flight Report

Date: 2025-04-27

Flight Campaign ID: P3C1

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

Aircraft: N821AR

Domain: 00 (Training & Calibration)

Sites Flown: R10D (Boulder Airport Radiometric Calibration)

Days left in Domain: 3

Report Author: Cameron

Lidar Operators: Mike

Flight Hours: 01:37

Spectrometer Operators: Cameron

Hours until maintenance: 113.65

Pilots: Justin, Jeff

GPS Instruments: AOP_KBDU

Ground Crew: Nick

Summary

Clear skies in Boulder allowed for Payload 3 to complete three iterations of the Boulder Airport Radiometric Calibration flight plan across multiple solar angles.

Concerns

- NIS-3 did not display waterfall upon initial startup and displayed multiple 'frame-grabber' errors. After a little troubleshooting and a complete system reboot, the NIS started functioning properly. No other issues occurred thereafter.

Comments

- All required Payload 3 calibrations flights have been completed.

Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees: (*)

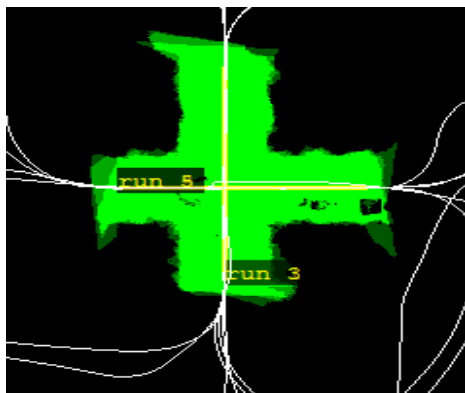
D00|R10D

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

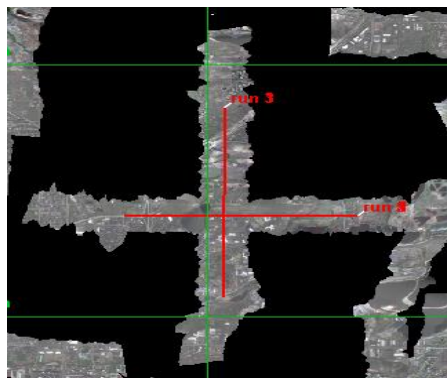
Total number of lines flown: 5

Flight Screenshots

Lidar Swath



NIS GeoPaint



Pictures



Top: Preparing for takeoff to fly the Boulder Airport Radiometric Calibration. NEON's Payload 2 is seen taxiing for takeoff also.

Bottom: A beautiful day in Boulder despite some early afternoon cloud development.



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: 100% (20/20)

Green: 0% (0/20)

Yellow: 85% (17/20)

Red: 15% (3/20)

* Flown within 35deg solar angle

D00|H10C (NEON Headquarters Lidar Test - Riegl)

1	2	3	4
---	---	---	---

Flown: 100% (4/4)

Green: 0% (0/4)

Yellow: 100% (4/4)

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: 86% (24/28)

Green: 7% (2/28)

Yellow: 68% (19/28)

Red: 11% (3/28)

* Flown within 35deg solar angle

D00|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)

* Flown within 35deg solar angle

D00|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	23	24	25	26	27	28	29											

Flown: 55% (16/29)

Green: 0% (0/29)

Yellow: 28% (8/29)

Red: 28% (8/29)

* Flown within 35deg solar angle

D00|W10C (Wiggle Timing Test - Riegl)

1	2
---	---

Flown: 100% (2/2)

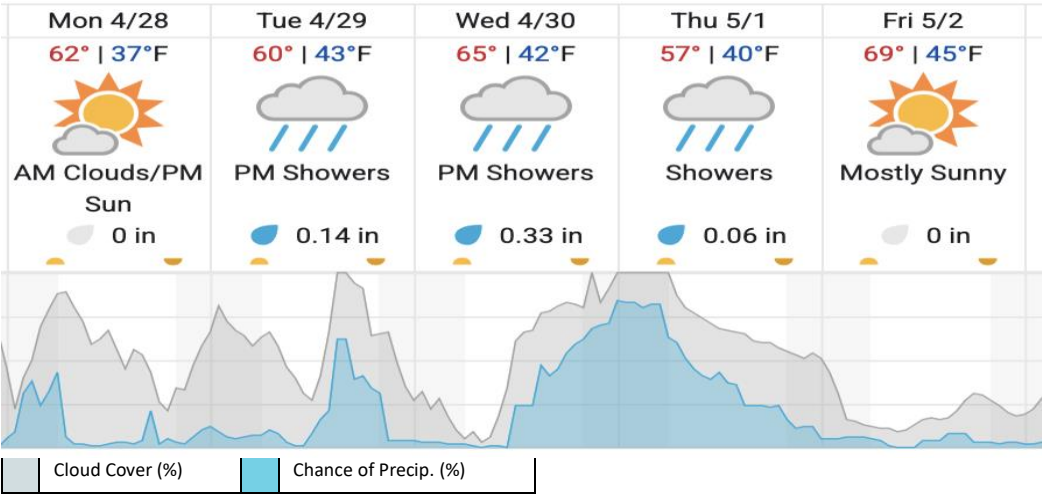
Green: 0% (0/2)

Yellow: 100% (2/2)

Red: 0% (0/2)

* Flown within 35deg solar angle

Boulder, CO (KBDU)



source: wunderground.com

Flight Collection Plan for 28 April 2025

No planned flight activity

If necessary

Crew: Elissa (Lidar), Cam (NIS), Nick (Ground)