



Payload 2 Daily Flight Report



Date: 2025-05-17

Flight Campaign ID: P2C1

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

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m), H10C (NEON HQ Lidar Validation)

Days left in Domain: 4

Report Author: Nick

Lidar Operators: Nick

Spectrometer Operators: Alyssa

Pilots: Vince, Mac

Ground Crew: Matt

Flight Hours: 02:15

Hours until maintenance: 106.08

GPS Instruments: AOP_KBDU, S-COGY

Summary

The crew took to the skies to collect the Greeley Boresight and NEON HQ Lidar validation in overcast conditions. Alyssa completed her first NIS training flight. Nick completed his P2 Lidar training flight. Calibration flight collections are complete. Engineering and training flights remain.

Concerns

- NIS Geopaint displayed a gap during line 15 of B10E. The waterfall did not blank out.
- TopoNav distances from starting jump distances causing late NIS collections. Flight team will need to investigate further.

Notes

- Alyssa completed her first NIS training flight.
- Nick complete P2 Lidar training.
- Camera triggering from the flight plans worked as advertised.
- Andrew formatted flight disks and replaced legacy SSD cards.
- Kris completed checksum errors troubleshooting. QAQC will be tested on today's flight.
- Matt continues to update the P2 lidar checklist.
- Cam rotates in today. Welcome back!

Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees: (*)

D00|B10E

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																				

Total number of lines flown: 20

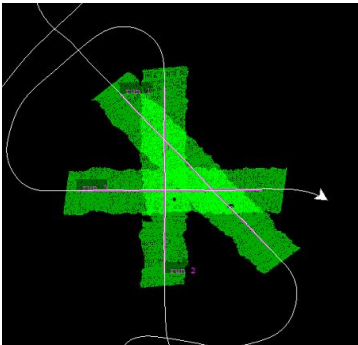
D00|H10C

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

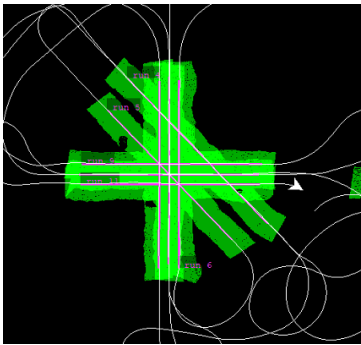
Total number of lines flown: 4

Flight Screenshots

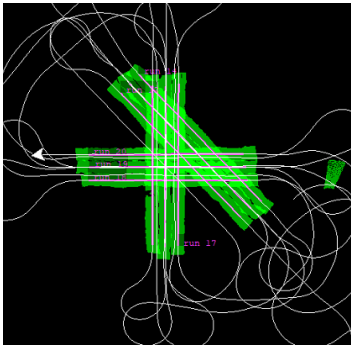
B10E



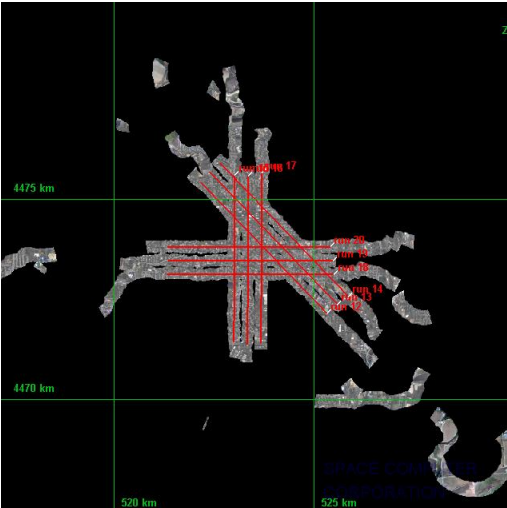
Lidar 1600m



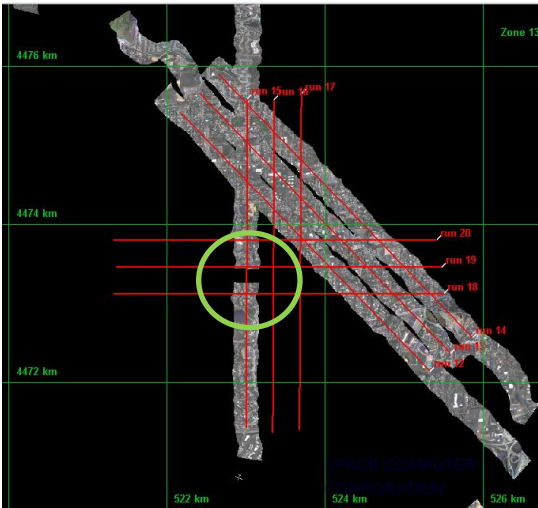
Lidar 1000m



Lidar 500m

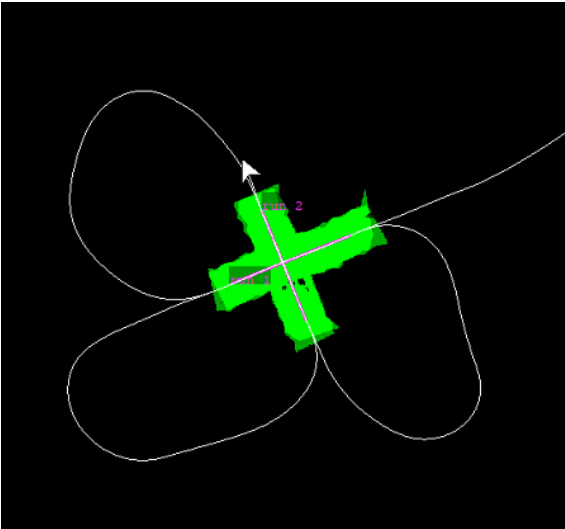


NIS B10E

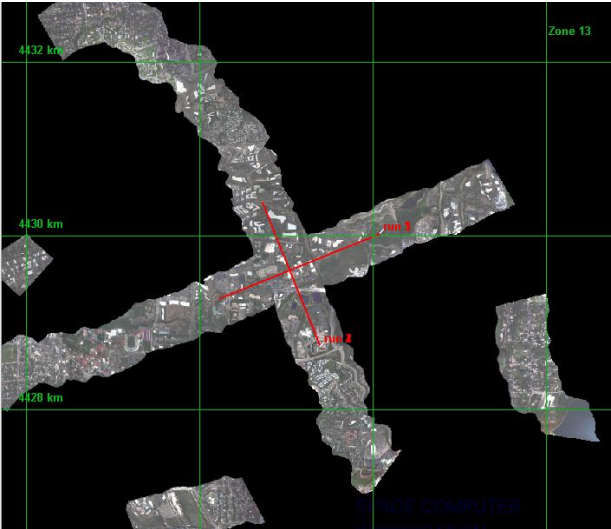


Swath gap

H10C



Lidar H10C



NIS H10C

Flight Photos



Photo courtesy of Alyssa

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: 100% (20/20)
Green: 0% (0/20)
Yellow: 0% (0/20)
Red: 100% (20/20)
* Flown within 35deg solar angle

D00|H10C (NEON Headquarters Lidar Test - Riegl)

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

Green: 0% (0/4)

Yellow: 0% (0/4)

Red: 100% (4/4)

* 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														

Flown: 100% (26/26)

Green: 0% (0/26)

Yellow: 0% (0/26)

Red: 100% (26/26)

* 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
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Flown: 100% (5/5)

Green: 100% (5/5)

Yellow: 0% (0/5)

Red: 0% (0/5)

D00|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)

D00|W10C (Wiggle Timing Test - Riegl)

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

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																		

Flown: 41% (9/22)

Green: 36% (8/22)

Yellow: 5% (1/22)

Red: 0% (0/22)

* Flown within 35deg solar angle

D00|V10D (Boulder City West - 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															

Flown: 0% (0/25)

Green: 0% (0/25)

Yellow: 0% (0/25)

Red: 0% (0/25)

D00|BLKF (Black Forest)

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

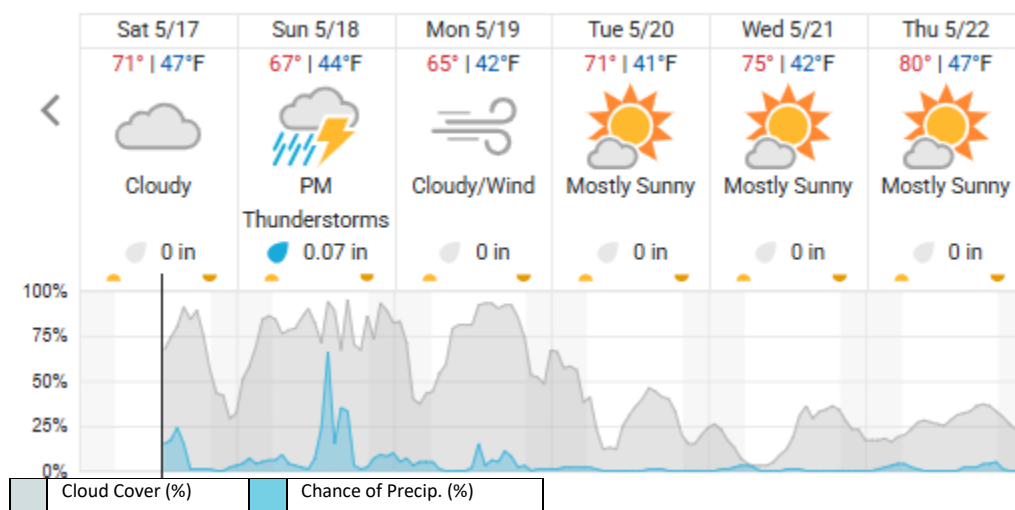
Green: 0% (0/17)

Yellow: 0% (0/17)

Red: 0% (0/17)

Weather Forecast

Boulder CO



source: wunderground.com

Flight Collection Plan for 17 May 2025

Flyority 1

Collection Area: Black Forest

Flight Plan Name: D10_BLFK_Black_Forest_v6_VQ780

On-Station Time: 1520 UTC / 0920 L

Flyority 2

Collection Area: Boulder City Nominal Science Flight

Flight Plan Name: D10_V10C_East/West_v13_VQ780

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

Flyority 3

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10B_NIS_Offset_v4_Q780

35° On-station Time: 1500 UTC / 0900 L

Crew: Cam (Lidar), Alyssa (NIS), Matt (Instructor), Nick (Ground)