



Payload 1 Daily Flight Report



Date: 2021-04-03

Flight Campaign ID: P1C2

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

Aircraft: N331AR

Domain: 00 (Training & Calibration)

Sites Flown: W10D (Wiggle Timing Test - Galaxy), H10D (NEON Headquarters Lidar Validation - Galaxy), R10E (Table Mountain Radiometric Calibration - Galaxy), B10F (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 550m - Galaxy)

Days left in Domain: 26

Report Author: Robb Walker

Lidar Operators: Abe Morrison

Spectrometer Operators: Robb Walker, Matt Devoe

Pilots: Ashley Taylor, Scott Hayward

Ground Crew: Robb Walker, John Adler, Bridget Hass

Flight Hours: 02:11, 02:22

Hours until maintenance: 116.85

GPS Instruments: AOP_KBDU, U-CHLL

Summary

Clouds lingered in the morning but gave way to clear skies by noon and even better into the afternoon. This allowed crew to have a record day of calibration flights in a single day.

Concerns

None

Comments

- Two cycles of Table Mountain Radiometric were completed.
- Abe Morrison has completed Galaxy Lidar certification.

Daily Coverage

Estimated Cloud Cover Key

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

D00|H10D

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

Total number of lines flown: 4

D00|W10D

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

Total number of lines flown: 2

D00|R10E

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

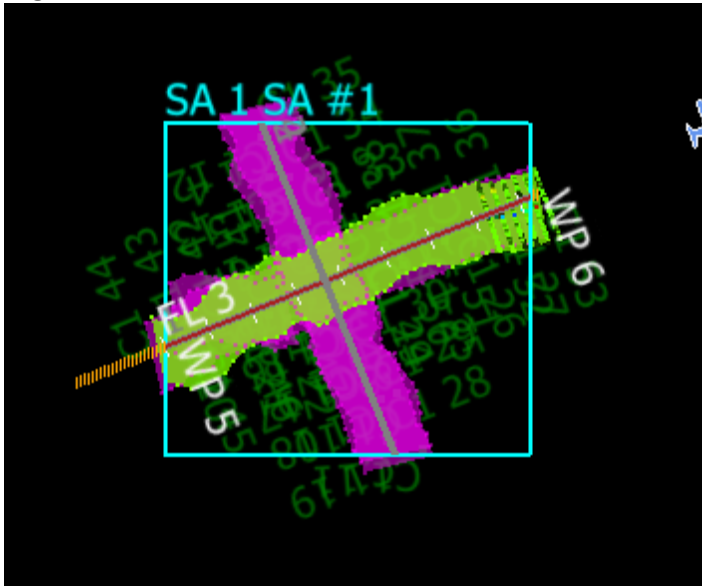
Total number of lines flown: 5

D00|B10F

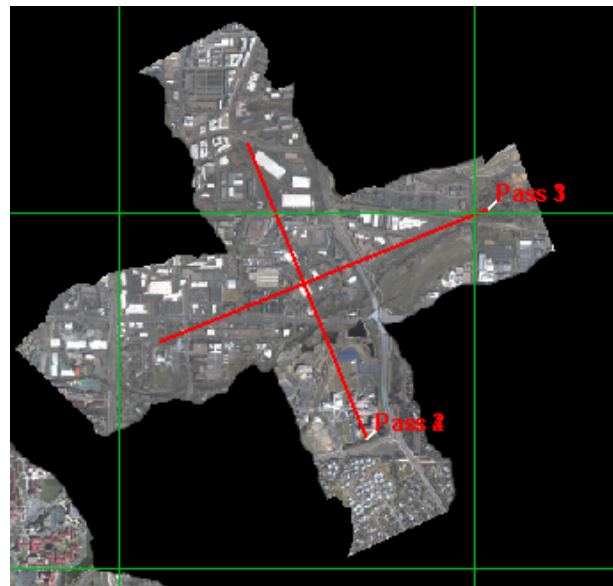
Line #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover																					

Total number of lines flown: 20

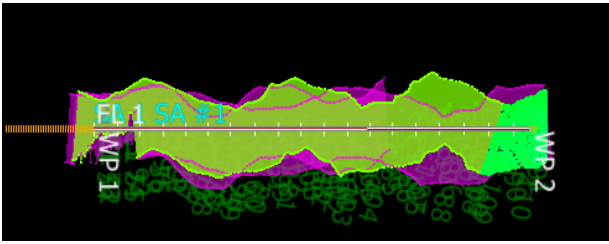
Flight Screenshots



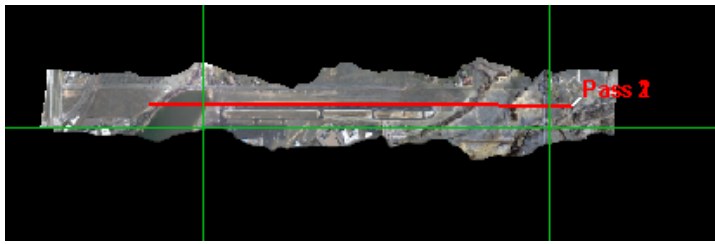
H10D (Lidar)



H10D (NIS)



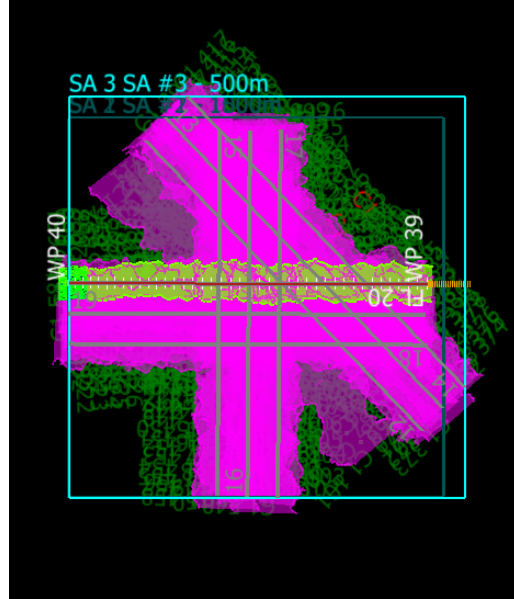
W10D (Lidar)



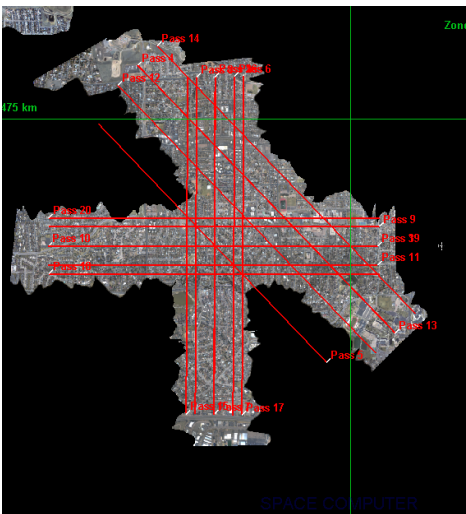
W10D (NIS)



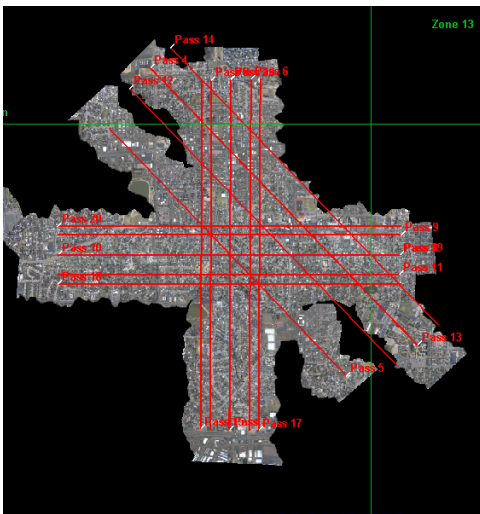
R10E (NIS)



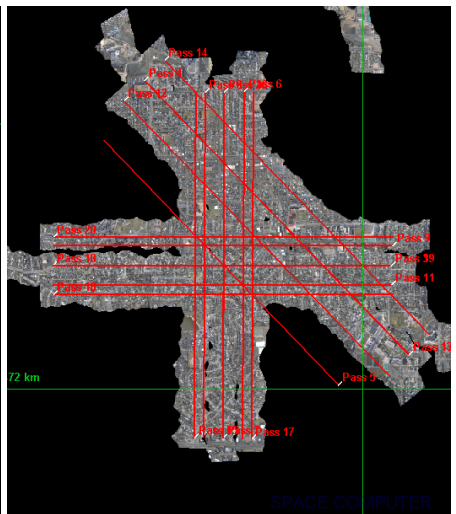
B10F (Lidar)



B10F 1500M (NIS)



B10F 1000M (NIS)



B10F 550M (NIS)

Pictures



Flatirons and clear skies over the Rockies

Cumulative Domain Coverage

D00|B10F (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 550m - Galaxy)

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: 100% (20/20)

Yellow: 0% (0/20)

Red: 0% (0/20)

D00|BLKF (Black Forest Waveform Range Test - Galaxy)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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21

Flown: 0% (0/21)

Green: 0% (0/21)

Yellow: 0% (0/21)

Red: 0% (0/21)

D00|H10D (NEON Headquarters Lidar Validation - Galaxy)

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

Green: 100% (4/4)

Yellow: 0% (0/4)

Red: 0% (0/4)

D00|N10F (Nominal Runway at KBDU - Galaxy)

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	30	31	32	33	34	35						

Flown: 0% (0/35)
 Green: 0% (0/35)
 Yellow: 0% (0/35)
 Red: 0% (0/35)

D00|O10C (NIS Offset - Galaxy)

1	2
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Flown: 0% (0/2)
 Green: 0% (0/2)
 Yellow: 0% (0/2)
 Red: 0% (0/2)

D00|R10E (Table Mountain Radiometric Calibration - Galaxy)

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|V10F (Boulder City Nominal - Galaxy)

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												

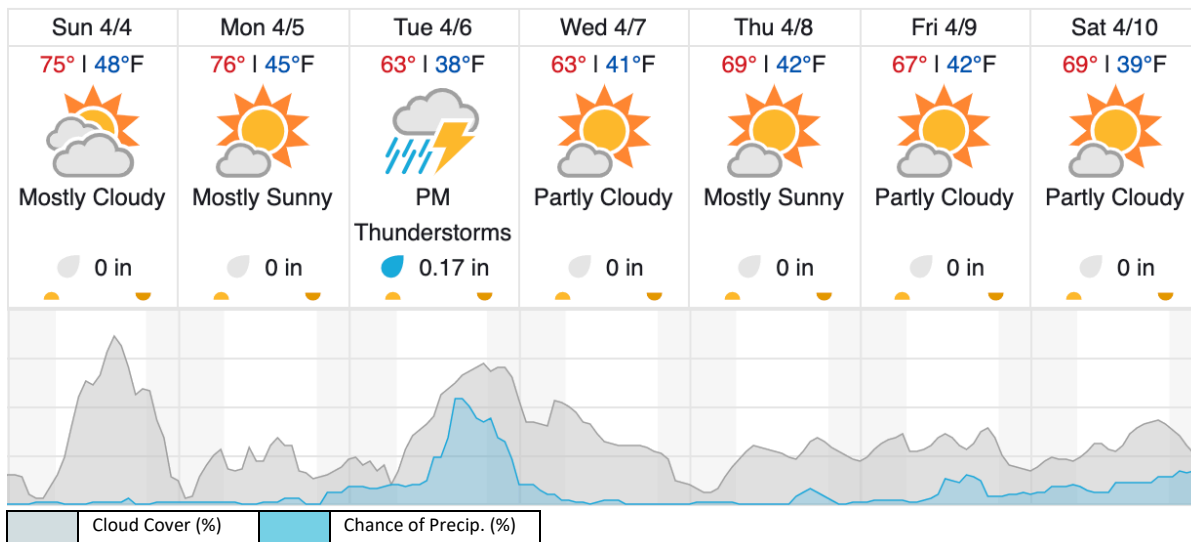
Flown: 14% (4/29)
 Green: 0% (0/29)
 Yellow: 0% (0/29)
 Red: 14% (4/29)

D00|W10D (Wiggle Timing Test - Galaxy)

1	2
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Flown: 100% (2/2)
 Green: 100% (2/2)
 Yellow: 0% (0/2)
 Red: 0% (0/2)

Weather Forecast



source: wunderground.com

Flight Collection Plan for 4 April 2021

No Flights planned

Flight Collection Plan for 5 April 2021

Resume training and remaining calibration flights.

Flyority 1

Collection Area: [Functional Checkout Flight] -- Nominal Runway Survey Flight Plan

Name: D10_N10F_Nominal_Rnwy_v9_PRM.xml

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

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

Flyority 2

Collection Area: Black Forest Waveform Range Test Flight

Flight Plan Name: D10_BLKF_Black_Forest_v3_PRM.xml

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

Additional Considerations: Snow on ground / trees okay.

Flyority 3

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10C_NIS_Offset_v2_PRM.xml

On-station Time: 1600 UTC / 1000 L

Crew: Matt, Abe, Robb, Mike, John