

#### Payload 1 Daily Flight Report



Date: 2024-09-11

Flight Campaign ID: P1C1

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

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: N10F (Nominal Runway at KBDU - Galaxy)

Days left in Domain: 11

Report Author: Nick

**Lidar Operators**: Nick **Flight Hours**: 02:00

**Spectrometer Operators**: Matt **Hours until maintenance**: 30.58 **Pilots**: Justin, Will **GPS Instruments**: AOP\_KBDU

Ground Crew: Mitch, Elissa

#### Summary

The crew commenced post season calibration flights with the successful collection of the Nominal Runway. After several restarts the NIS cooperated with the flight and completed collections in record time. However, due to an error the waveform data disk was erased during extraction process. The discrete data looks acceptable and will be verified with QAQC. Science has confirmed there will not be a need to repeat the flight for the missing data.

Tomorrow's forecast for a radiometric has changed and is looking more favorable for Friday.

### **Concerns**

None.

## Comments

Thanks to the P3 crew that filled in as ground today.

#### **Daily Coverage**

**Estimated Cloud Cover Kev** 

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

# Solar Angle Less Than 40 degrees

Line #

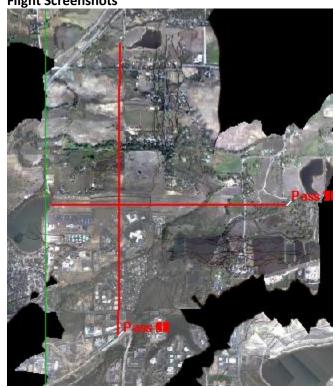
#### D00|N10F

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

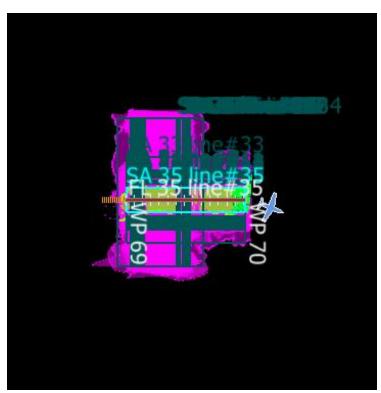
Line #	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Lidar	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>&lt;</b>	<b>✓</b>	✓	<b>✓</b>	<	<b>✓</b>	<b>\</b>							
Spectrometer	✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>									
Camera	✓	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>									
Cloud Cover																	

Total number of lines flown: 37

**Flight Screenshots** 



NIS Screenshot 2024091115



Lidar Screenshot 2024091115

## **Pictures**

None

# **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

Flown: 0% (0/20) Green: 0% (0/20) Yellow: 0% (0/20) Red: 0% (0/20)

# D00 | H10D (NEON Headquarters Lidar Validation - Galaxy)

			•
1	2	3	4
Flow	n:	0%	(0/4)
Gree	n:	0%	(0/4)
Yello	w:	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	36	37			

Flown: 100% (37/37) Green: 0% (0/37) Yellow: 100% (37/37) Red: 0% (0/37)

# D00 | O10C (NIS Offset - Galaxy)

1 2

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 Flown: 0% (0/5) Green: 0% (0/5)

Yellow: 0% (0/5) Red: 0% (0/5)

# D00 | R10F (Boulder Airport Radiometric Calibration - Galaxy)

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

Green: 0% (0/5) Yellow: 0% (0/5) Red: 0% (0/5)

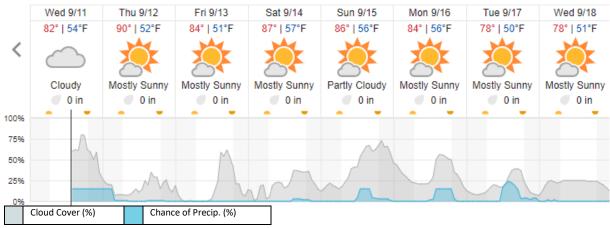
# D00 | W10D (Wiggle Timing Test - Galaxy)

1 2

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

#### **Weather Forecast**

#### **Boulder CO**



source: wunderground.com

# Flight Collection Plan for September 12, 2024

## Flyority 1

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10\_R10E\_Radiometric\_Cal\_Table\_Mtn\_v\_PRM

 $40^{\circ}$  On-station Time: 1630 UTC / 1030 L |  $45^{\circ}$  On-station Time: 1700 UTC / 1100 L

Additional Considerations: Ground should be dry.

#### Flyority 2

Collection Area: Boresight Calibration - Greeley, CO

Flight Plan Name: D10 B10F Boresight Geocal V190.PRM

30° On-station Time: 1530 UTC / 0930 L

Additional Considerations: No recent snowfall, clear roofs required.

### Flyority 3

Collection Area: NEON HQ Lidar Validation

Flight Plan Name: D10\_H10D\_HQ\_LIDAR\_Validation\_v2\_PRM

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

#### Flyority 4

Collection Area: Wiggle Timing Test

Flight Plan Name: D10\_W10D\_Wiggle\_Test\_v7\_PRM

40° On-station Time: 1630 UTC / 1030 L

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

#### Flyority 5

Collection Area: NIS Offset Flight

Flight Plan Name: D10\_O10C\_NIS\_Offset\_v3\_PRM

35° On-station Time: 1600 UTC / 1000 L

# **Flight Crew**

Matt (Lidar), Nick (NIS)