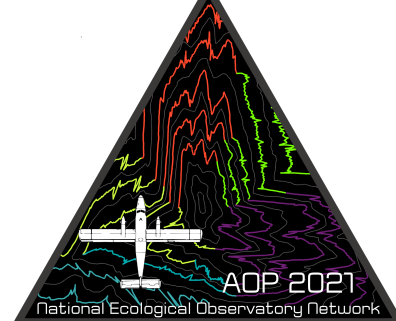




## Payload 1 Daily Flight Report



**Date:** 2021-04-05

**Flight Campaign ID:** P1C2

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

**Aircraft:** N331AR

**Domain:** 00 (Training & Calibration)

**Sites Flown:** N10F (Nominal Runway at KBDU - Galaxy), V10F (Boulder City Nominal Training Flight)

**Days left in Domain:** 24

**Report Author:** Michael Wussow

**Lidar Operators:** Michael Wussow, John Adler

**Spectrometer Operators:** Robb Walker, Michael Wussow

**Pilots:** Scott Hayward, Ashley Taylor

**Adt'l Flight Crew:** Matt Devoe

**Flight Hours:** 02:13 + 00:51

**Hours until maintenance:** 113.78

**GPS Instruments:** AOP\_KBDU

**Ground Crew:** Abe Morrison, John Adler

### Summary

Two flights were conducted today. An attempt at the Nominal Runway was made, but windy and thermal conditions were increasingly difficult for maintaining proper survey specifications, i.e. ground speed and altitude. This flight was aborted due to the possible negative effects on data quality and lack of fuel to complete this calibration flight in one survey. A second flight was completed for training.

### Concerns

- Due to conditions during the N10F attempt, it should be completely re-flown with attempt to collect all lines in one flight.
- Not much progress was made on the data extraction issues from earlier flights, but efforts are continuing.

### Comments

John Adler has completed his training on the Galaxy and Michael Wussow has completed one training flight on the Galaxy.

### Daily Coverage

Estimated Cloud Cover Key

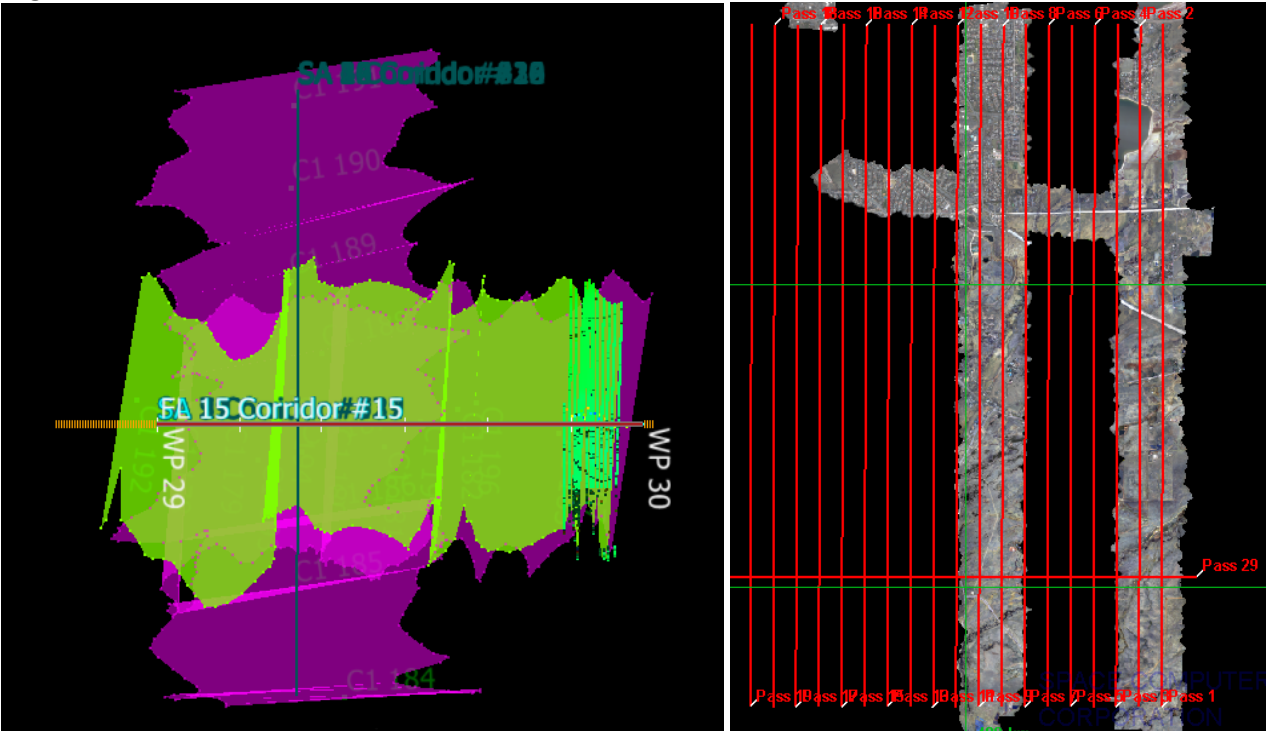
Green:	Yellow:	Red:
0-10%	11-50%	>50%

D00|N10F

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

Total number of lines flown: 15

Flight Screenshots



N10F Lidar

V10C NIS

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: 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
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
---	---	---	---

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: 43% (15/35)  
Green: 0% (0/35)  
Yellow: 0% (0/35)  
Red: 43% (15/35)

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: 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											

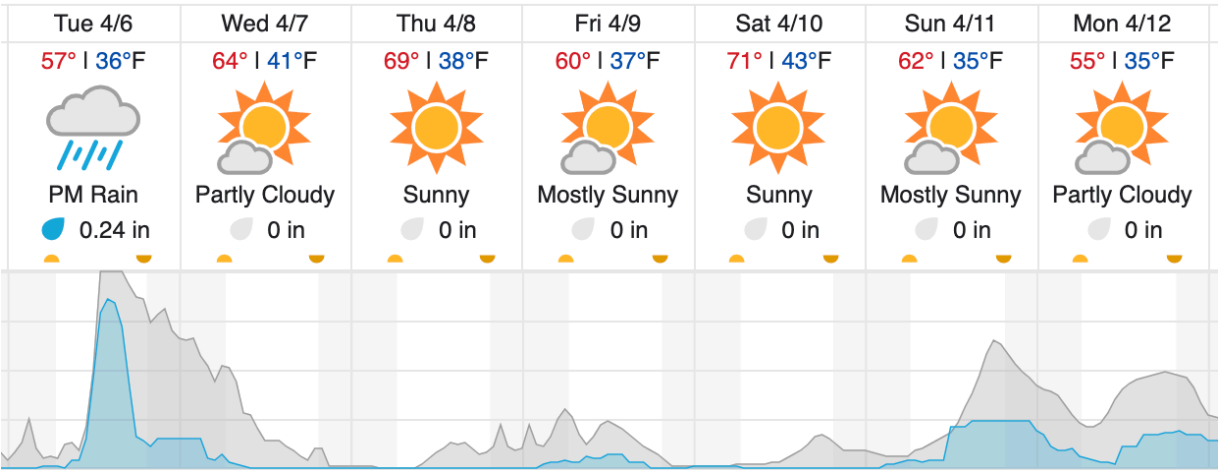
Flown: 14% (4/29)  
Green: 0% (0/29)  
Yellow: 0% (0/29)  
Red: 14% (4/29)

D00|W10D (Wiggle Timing Test - Galaxy)

1	2
---	---

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

Weather Forecast



Cloud Cover (%)	Chance of Precip. (%)
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source: wunderground.com

## **Flight Collection Plan for 6 April 2021**

### **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