



## Payload 3 Daily Flight Report



**Date:** 2020-08-19

**Flight Campaign ID:** P3C1

**Airport, FBO ID, City:** Rocky Mountain Metropolitan Airport (KBJC) - Broomfield, CO

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

**Sites Flown:** Transit (KRHI -> KFSD -> KLBF -> KBJC)

**Days left in Domain:** 28

**Report Author:** Mitch Haynes

**Lidar Operators:** Mitch Haynes

**Spectrometer Operators:**

**Pilots:** Mike Francis, Lane Taylor

**Ground Crew:** Matt DeVoe, Cameron Chapman, Elissa Barris

**Flight Hours:** 02:25 + 01:40 + 01:35

**Hours until maintenance:** 34.78

### Summary

Crew successfully transited from Rhinelander, WI to a temporary home in Broomfield, CO following the completion of collects in D05.

### Concerns

- For today's flights, we requested the pilots use the "bad" inverter to provide survey power for the entire duration of the transit. Even with both lidar & spectrometer systems started up, there were no power loss issues observed during any of the flights. However directly following one of the transfers to ground power, when closing the cover over the "Ground" switch, the Master Power light went off, and the system lost power, reverting back to UPS power. A very light "knock" was given to the AXE box above the Master Power switch, and the system regained power. These two events lead me to believe that the power drop issues observed during Monday's flight were not due to a bad aircraft inverter but rather a bad connection within the AXE.

### Comments

- P3 Crew will take tomorrow as an "Administrative No Fly Day" to allow crew and pilots to get caught up on remaining D05 data, Update ServiceNow tickets for issue tracking, make plans for the remaining engineering & calibration flights, etc.
- HTK3 is now set up and online at the PIF. Once troubleshooting the QAQC from yesterday's flight is complete, RAID 2020\_P3C1\_06 containing most of the D05 data will be shipped.
- P3-N70AR will relocate back to the PIF in Boulder following flights and the deinstallation of P2 from N615AR on Friday.

**Pictures**



**Top:** Mississippi River just SE of Minneapolis **Below:** Junction of the Missouri and Niobrara Rivers on the NE-SD border



## 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: 100% (20/20)

Yellow: 0% (0/20)

Red: 0% (0/20)

### D00|CPER (Satellite Overpass Coincident Collection & 1000m Multiple Altitude Test Flight - CPER)

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: 100% (27/27)

Green: 100% (27/27)

Yellow: 0% (0/27)

Red: 0% (0/27)

### D00|H10C (NEON Headquarters Lidar Test - Riegl)

1	2
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Flown: 100% (2/2)

Green: 100% (2/2)

Yellow: 0% (0/2)

Red: 0% (0/2)

### D00|K10A (2000m Multiple Altitude Test Flight - CPER)

2	3	4	5	6	7	8	9	10	11	12	13
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Flown: 0% (0/12)

Green: 0% (0/12)

Yellow: 0% (0/12)

Red: 0% (0/12)

### D00|K10B (2000m Multiple Altitude Test Flight - RMNP)

2	3	4	5	6	7	8	9	10	11	12	13
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Flown: 0% (0/12)

Green: 0% (0/12)

Yellow: 0% (0/12)

Red: 0% (0/12)

### 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: 92% (24/26)

Green: 0% (0/26)

Yellow: 62% (16/26)

Red: 31% (8/26)

### D00|O10B (NIS Offset - Riegl)

1	2
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Flown: 100% (2/2)

Green: 0% (0/2)

Yellow: 100% (2/2)

Red: 0% (0/2)

### 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 | RMNP (1000m Multiple Altitude Test Flight - RMNP)

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	38	39			

Flown: 0% (0/38)  
 Green: 0% (0/38)  
 Yellow: 0% (0/38)  
 Red: 0% (0/38)

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: 7% (2/29)  
 Green: 0% (0/29)  
 Yellow: 0% (0/29)  
 Red: 7% (2/29)

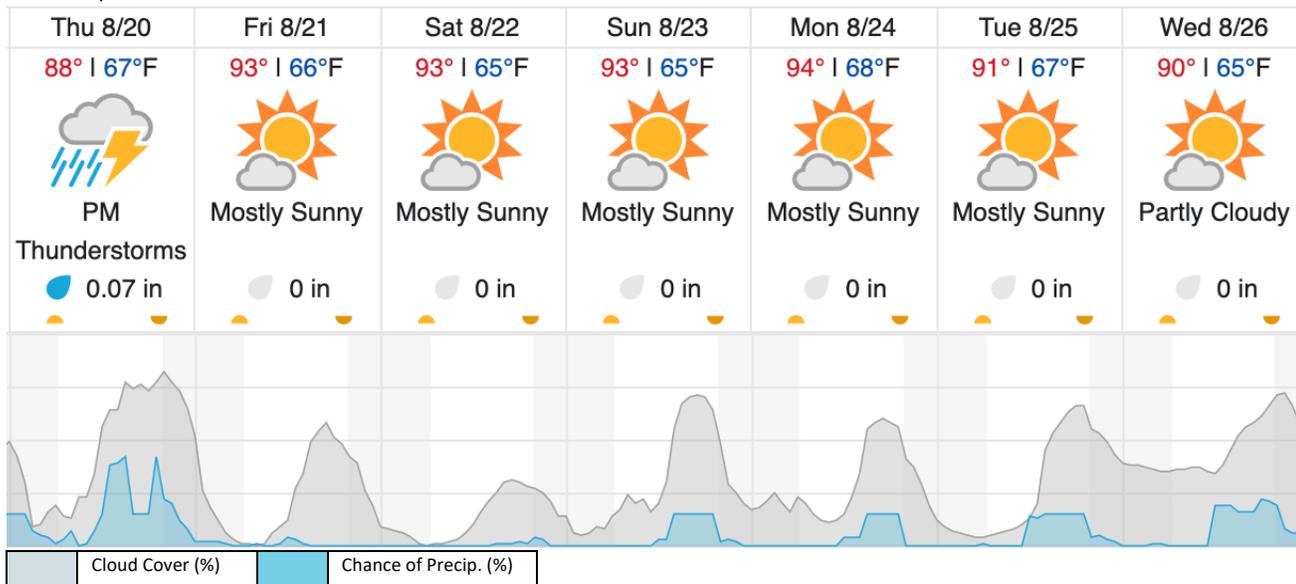
D00 | W10C (Wiggle Timing Test - Riegl)

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

**Weather Forecast**

Boulder, CO



**Flight Collection Plan for 20 August 2020**

Administrative No Fly Day  
 Crew: Mitch Haynes & Cameron Chapman

**Flight Collection Plan for 21 August 2020**

(Flight Order Priority subject to change)

**Flyority 1**

Collection Area: Satellite Overpass Coincident Collection & 1000m Multiple Altitude Test Flight - CPER  
 Flight Plan Name: D10\_CPER\_C1\_P1\_v6\_Q780

On-station Time: 1000 – 1600 Local / 1600 – 2200 UTC

**Flyority 2**

Collection Area: 2000m Multiple Altitude Flight - CPER

Flight Plan Name: D10\_K10A\_Multiple\_Alt\_2000m\_v1

On-station Time: 1000 – 1600 Local / 1600 – 2200 UTC

**Flyority 3**

Collection Area: 1000m Multiple Altitude Test Flight - RMNP

Flight Plan Name: D10\_RMNP\_R2\_P1\_v2\_Q780

On-station Time: 1000 – 1610 Local / 1600 – 2210 UTC

**Flyority 4**

Collection Area: 2000m Multiple Altitude Flight - RMNP

Flight Plan Name: D10\_K10B\_Multiple\_Alt\_v2

On-station Time: 1000 – 1610 Local / 1600 – 2210 UTC

Crew: Mitch Haynes & Cameron Chapman

**Flyority 5**

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10\_R10C\_Rad\_Cal\_TBMT\_v1\_Q780

On-station Time: 1000 – 1610 Local / 1600 – 2210 UTC

**Flyority 6**

Collection Area: Riegl Boresight Calibration at Greeley

Flight Plan Name: D10\_B10E\_Boresight\_1600m\_Q780

On-station Time: 0900 – 1700 Local / 1500 – 2300 UTC

**Flyority 7**

Collection Area: Nominal Runway

Flight Plan Name: D10\_N10D\_Nominal\_Runway\_v8\_Q780

**Flyority 8**

Collection Area: Wiggle Timing Test

Flight Plan Name: D10\_W10C\_Wiggle\_Test\_v5\_Q780

**Flyority 9**

Collection Area: NEON HQ LIDAR Validation

Flight Plan Name: D10\_H10C\_HQ\_val\_v1\_Q780

**Flyority 10**

Collection Area: NIS Offset Flight

Flight Plan Name: D10\_O10B\_NIS\_Offset\_v2\_Q780

On-station Time: 0930 – 1640 Local / 1530 – 2240 UTC

Crew: Mitch Haynes & Cameron Chapman