



## Payload 3 Daily Flight Report



**Date:** 2024-07-30

**Flight Campaign ID:** P3C1

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

**Aircraft:** N821AR

**Domain:** 10 (Central Plains), 13 (Southern Rockies & Colorado Plateau)

**Sites Flown:** RMNP (Rocky Mountain National Park), NIWO (Niwot Ridge Mountain Research Station)

**Days left in Domain:** 29

**Report Author:** Nick

**Lidar Operators:** Nick

**Flight Hours:** 03:40

**Spectrometer Operators:** Matt **Hours until maintenance:** 110.52

**Pilots:** Vince, Manning **GPS Instruments:** AOP\_KBDU, AOP\_NIWO

### Summary

The crew took advantage of a favorable weather front to complete NIWO flight area and RMNP airshed flight lines in cloud free conditions. The Alexander Mountain wildfire continues to rage; however, easterly winds push smoke away from the Rocky Mountain flight areas with minor smoke near Estes Park. The Stone Mountain wildfire started this afternoon near Lyons.

### Concerns

The crew will continue to monitor the Alexander and Stone Mountain wildfires. Today, TFRs, winds and air traffic did not impact collections. Winds are expected to shift Wednesday evening and bring needed rain.

Brendan replaced the chiller after yesterday's flight and resulted in acceptable cooling today.

NIWO cross strip lidar failed with no returns. Switching to a higher power setting resulted in acceptable returns.

Yesterday's flight failed extract and QAQC. Andrew manually extracted the flight today and is currently running QAQC. This will delay extraction of today's flight.

### Comments

None.

### Daily Coverage

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees

Line #
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D13|NIWO

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

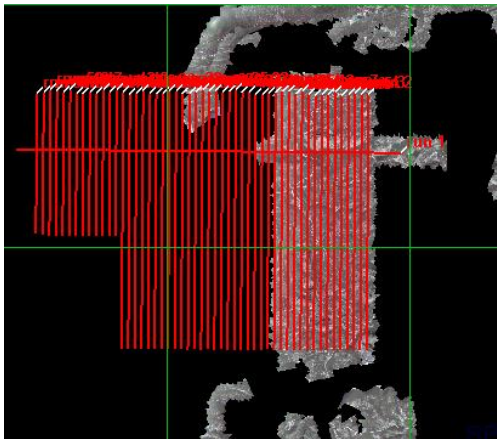
Total number of lines flown: 15

D10|RMNP

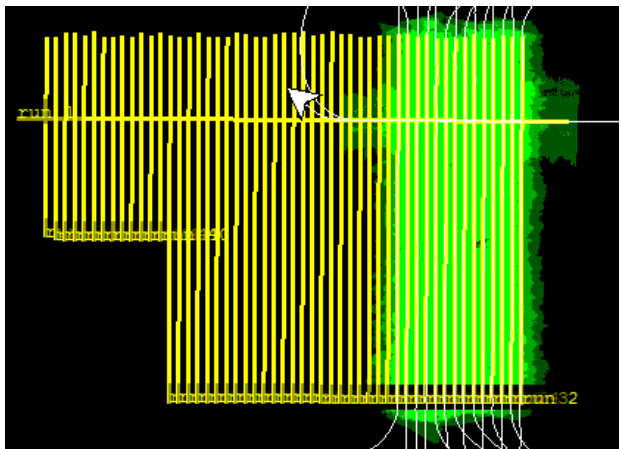
Line #	1	31	32	33	34	35	36	37	38	39
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer		✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover										

Total number of lines flown: 10

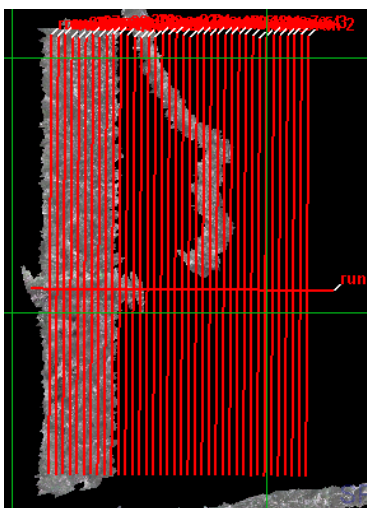
Flight Screenshots



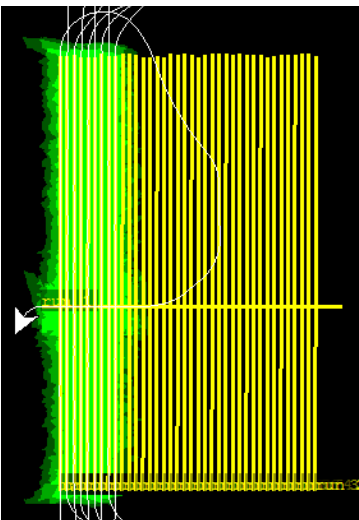
NIS screenshot NIWO



Lidar screenshot NIWO



NIS screenshot RMNP



Lidar screenshot RMNP

**Pictures**



RMNP tower



Alexander Mountain wildfire taken from over Estes Park CO

**Cumulative Domain Coverage**

**D10|ARIK (Arikaree River)**

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% (0/33)  
 Green: 0% (0/33)  
 Yellow: 0% (0/33)  
 Red: 0% (0/33)

**D10|RMNP (Rocky Mountain National Park)**

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	40	

Flown: 23% (9/39)  
 Green: 23% (9/39)  
 Yellow: 0% (0/39)  
 Red: 0% (0/39)

**D10|STER (Sterling Agricultural Site)**

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: 100% (25/25)  
 Green: 100% (25/25)  
 Yellow: 0% (0/25)  
 Red: 0% (0/25)

D13 | NIWO (Niwot Ridge Mountain Research Station)

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	40	41
42	43	44	45	46	47	48	49	50	51	52									

Flown: 100% (51/51)  
 Green: 100% (51/51)  
 Yellow: 0% (0/51)  
 Red: 0% (0/51)

D13 | WLOU (West St. Louis Creek)

2	3	4	5	6	7	8	9	10	11	12	13	14
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Flown: 0% (0/13)  
 Green: 0% (0/13)  
 Yellow: 0% (0/13)  
 Red: 0% (0/13)

D15 | CTWD\_P1 (RSS)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
21	22																			

Flown: 0% (0/22)  
 Green: 0% (0/22)  
 Yellow: 0% (0/22)  
 Red: 0% (0/22)

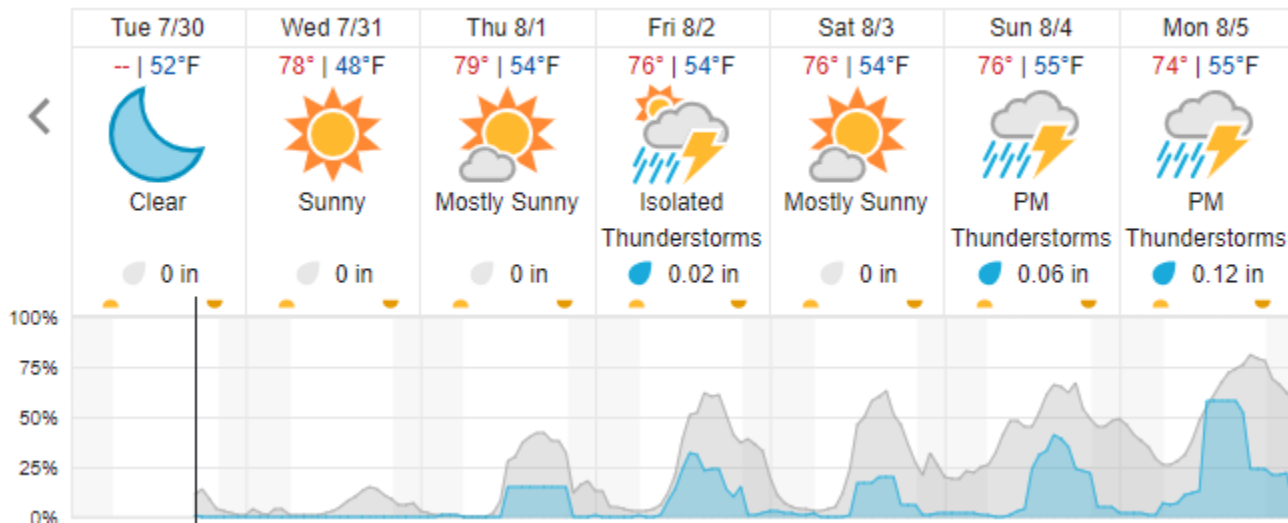
D15 | CTWD\_P2 (RSS)

23	24	25	26	27	28	29
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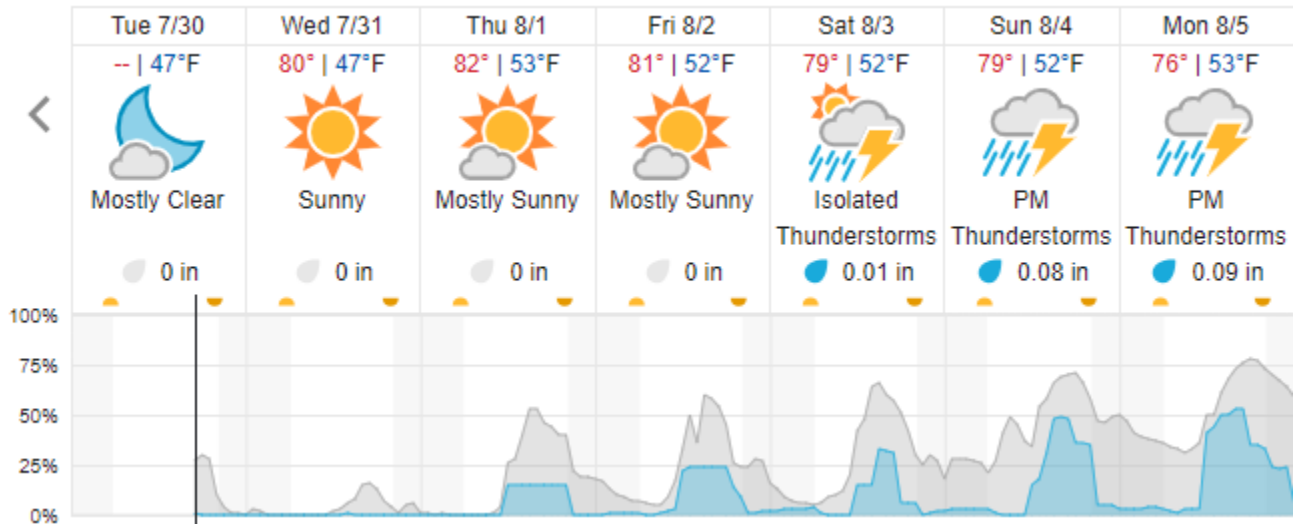
Flown: 0% (0/7)  
 Green: 0% (0/7)  
 Yellow: 0% (0/7)  
 Red: 0% (0/7)

**Weather Forecast**

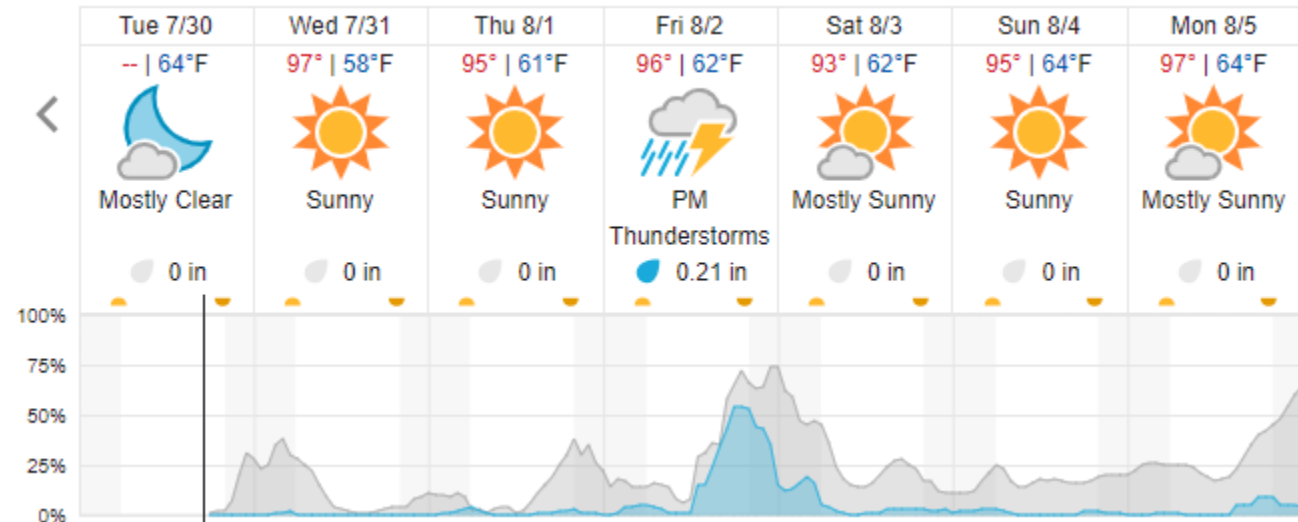
Allenspark CO (RMNP)



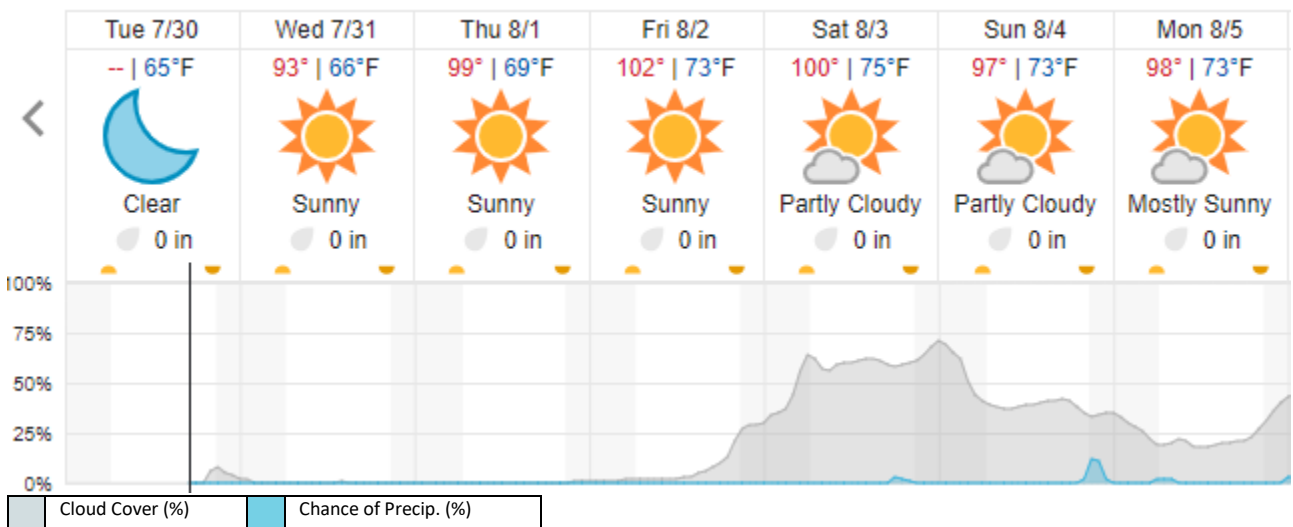
Fraser CO (WLOU)



Joes CO (ARIK)



Ogden UT (CTWD)



Cloud Cover (%)    Chance of Precip. (%)

## **Flight Collection Plan for July 31, 2024**

### **Flyority 1**

Collection Area: Rocky Mountain National Park (RMNP)

Flight Plan Name: D10\_RMNP\_R2\_P1\_v4\_Q780

On-station Time: 1530 UTC / 0930 L

### **Flyority 2**

Collection Area: West St. Louis Creek (WLOU)

Flight Plan Name: D13\_WLOU\_A1\_P1\_v2\_Q780

On-station Time: 1540 UTC / 0940 L

### **Flyority 3**

Collection Area: Arikaree River (ARIK) – Priority 1 & 2 Flight Box

Flight Plan Name: D10\_ARIK\_A1\_P2\_v3\_Q780

On-station Time: 1520 UTC / 0920 L

### **Flyority 4**

Collection Area: Northern Utah Priority 1 Flight Plan

Flight Plan Name: D15\_CTWD\_S1\_P1\_v1

On-station Time: 1520 UTC / 0920 L

### **Flyority 4**

Collection Area: Northern Utah Priority 2 Flight Plan

Flight Plan Name: D15\_CTWD\_S1\_P2\_v1

On-station Time: 1520 UTC / 0920 L

Crew: Matt (Lidar), Nick (NIS)