

Date: 2020-08-09
Flight Campaign ID: P2C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Domain: 00 (Training \& Calibration)
Sites Flown: B10B (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 500m)
Days left in Domain: 22

Report Author: Michael Wussow
Lidar Operators: Michael Wussow
Spectrometer Operators: Ivana Vu Pilots: Justin Eddington, Stephen Brawders
Ground Crew: John Adler

Flight Hours: 02:11
Hours until maintenance: 24.57
GPS Instruments: AOP_KBDU, U-CHLL

## Summary

While primarily cloudless in north central Colorado, smoke from the Pine Gulch fire near Grand Junction blanketed much of the area in a smoky haze. These conditions were not ideal for spectrometer research flights but considered acceptable for the Greeley Boresight flight with consistent illumination of the ground. The entire B10B flight plan was flown today.

## Concerns

Smoke from the Pine Gulch fire may persist as the fire grows.

## Comments

None

## Daily Coverage

Estimated Cloud Cover Key

| Green: | Yellow: | Red: |
| :---: | :---: | :---: |
| $0-10 \%$ | $11-50 \%$ | $>50 \%$ |

D00|B10B

| Line \# | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lidar | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Spectrometer | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Camera | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Cloud Cover |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Total number of lines flown: 20

Flight Screenshots


Pictures


Moderate haze when looking southeast

## Cumulative Domain Coverage

D00|B10B (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 500m)

| 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: 0\% (0/20)
Yellow: 100\% (20/20)
Red: 0\% (0/20)

D00|CPER (Satellite Overpass Coincident Collection - Central Plains Ecological Range)

| 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 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Flown: 0\% (0/28)
Green: 0\% (0/28)
Yellow: $0 \%(0 / 28)$
Red: 0\% (0/28)

D00|F10A (D10 BRDF Flight - Central Plains Ecological Range)

| 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|H10B (NEON Headquarters Lidar Test - modified cross-track)

| 1 | 2 | 3 | 4 |
| :--- | :--- | :--- | :--- |

Flown: 100\% (4/4)
Green: 50\% (2/4)
Yellow: 50\% (2/4)
Red: 0\% (0/4)

D00|N10C (Nominal Runway at KBDU - Optech)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Flown: 100\% (14/14)
Green: 0\% (0/14)
Yellow: $0 \%(0 / 14)$
Red: 100\% (14/14)

D00|O10A (NIS Offset)

| 1 | 2 |
| :--- | :--- |

Flown: 100\% (2/2)
Green: 100\% (2/2)
Yellow: 0\% (0/2)
Red: 0\% (0/2)
D00|R10A (Table Mountain Radiometric Calibration)

| 1 | 2 | 3 | 4 | 5 |
| :--- | :--- | :--- | :--- | :--- |

Flown: 100\% (5/5)
Green: $100 \%(5 / 5)$
Yellow: $0 \%(0 / 5)$
Red: 0\% (0/5)

D00|W10B (Wiggle Timing Test)

| 1 | 2 |
| :--- | :--- |

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

## Weather Forecast

## Boulder, CO



## Nunn, CO

| Mon $8 / 10$ | Tue $8 / 11$ | Wed $8 / 12$ | Thu $8 / 13$ | Fri $8 / 14$ |
| :---: | :---: | :---: | :---: | :---: |
| $93^{\circ} 173^{\circ} \mathrm{F}$ | $89^{\circ} 171^{\circ} \mathrm{F}$ | $88^{\circ} 170^{\circ} \mathrm{F}$ | $87^{\circ} 169^{\circ} \mathrm{F}$ | $88^{\circ} 170^{\circ} \mathrm{F}$ |



|  | Cloud Cover (\%) |  | Chance of Precip. (\%) |
| :--- | :--- | :--- | :--- |

## Flight Collection Plan for 10 August 2020

## Flyority 1

Collection Area: Satellite Overpass Coincident Collection - Central Plains Ecological Range (only if conditions are "green")
Flight Plan Name: D10_CPER_C1_P1_v4.pIn
On-station Time: 0950-1620 Local / 1550-2220 UTC

## Flyority 2

Collection Area: D10 BRDF Flight - Central Plains Ecological Range (only if conditions are "green")
Flight Plan Name: D10_F10A_BRDF_v1.pln
On-station Time: 0950-1620 Local / 1550-2220 UTC
Flyority 3
Collection Area: Radiometric Calibration at Table Mountain
Flight Plan Name: D10_R10A_Radiometric_Calibration_Table_Mountain_v1.pln
On-station Time: 0950-1620 Local / 1550-2220 UTC

## Flyority 4

Collection Area: NIS Offset Flight
Flight Plan Name: D10_O10A_NIS_Offset_v1.pln
On-station Time: 0930-1650 Local / 1530-2250 UTC
Crew members: Ivana (Lidar), Mike (NIS), John (Ground); Tristan, Alok, Robb (Tarps)
Flight Collection Plan for 11 August 2020
Flyority: Same as previous day
Crew members: Mike (Lidar), Ivana (NIS), John (Ground); Tristan, Alok, Robb (Tarps)

