Date: 2024-05-05
Flight Campaign ID: P1C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Aircraft: N615AR

Domain: 00 (Training & Calibration)
Sites Flown: CPER (Central Plains Ecological Range) – Waveform Digitizer Test Flight
Days left in Domain: 7

Report Author: Mike
Lidar Operators: Mike
Flight Hours: 03:25
Spectrometer Operators: N/A
Hours until maintenance: 110.33
Pilots: Jeff, Shane
GPS Instruments: AOP_CPER, AOP_KBDU
Ground Crew: Elissa

Summary
A successful lidar/digitizer test flight was conducted today. The full CPER site was flown using the maximum (1000) PRF settings for the Galaxy system. No issues with the lidar system were experienced during the flight.

Concerns
The NIS was booted on the ground with the intention of leaving it idle during the flight to see if errors occurred, regardless of if data was collected. When checking the system shortly after takeoff, the NIS was already experiencing the framegrabber error and was promptly shutdown for the rest of the flight.

Comments
Mike departs Boulder tomorrow.

Daily Coverage

Estimated Cloud Cover Key

<table>
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<tr>
<th>Green: 0-10%</th>
<th>Yellow: 11-50%</th>
<th>Red: &gt;50%</th>
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Solar Angle Less Than 40 degrees

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D00|CPER

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Total number of lines flown: 28

Flight Screenshots

Pictures

Bluffs of the Pawnee National Grassland northeast of CPER
## Cumulative Domain Coverage

### D00|B10F (Complete Greeley Boresight Geocalibration - 1500m, 1000m, 550m - Galaxy)

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- **Flown:** 100% (20/20)
- **Green:** 10% (2/20)
- **Yellow:** 90% (18/20)
- **Red:** 0% (0/20)

### D00|BLKF (Black Forest Waveform Range Test - Galaxy)

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- **Flown:** 0% (0/21)
- **Green:** 0% (0/21)
- **Yellow:** 0% (0/21)
- **Red:** 0% (0/21)

### D00|CPER (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:** 100% (28/28)
- **Green:** 0% (0/28)
- **Yellow:** 0% (0/28)
- **Red:** 100% (28/28)

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

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- **Flown:** 100% (4/4)
- **Green:** 0% (0/4)
- **Yellow:** 100% (4/4)
- **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:** 43% (16/37)
- **Red:** 57% (21/37)

### D00|O10C (NIS Offset - Galaxy)

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

### D00|R10E (Table Mountain Radiometric Calibration - Galaxy)

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- **Flown:** 0% (0/5)
- **Green:** 0% (0/5)
- **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: 38% (11/29)
Green: 0% (0/29)
Yellow: 0% (0/29)
Red: 38% (11/29)

D00|W10D (Wiggle Timing Test - Galaxy)

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

Weather Forecast

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<thead>
<tr>
<th>Mon 5/6</th>
<th>Tue 5/7</th>
<th>Wed 5/8</th>
<th>Thu 5/9</th>
<th>Fri 5/10</th>
<th>Sat 5/11</th>
<th>Sun 5/12</th>
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<tbody>
<tr>
<td>56°</td>
<td>43°F</td>
<td>56°</td>
<td>36°F</td>
<td>58°</td>
<td>38°F</td>
<td>55°</td>
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<tr>
<td>Partly Cloudy/Wind</td>
<td>Partly Cloudy/Wind</td>
<td>Mostly Sunny</td>
<td>Mostly Cloudy</td>
<td>AM Showers</td>
<td>Partly Cloudy</td>
<td>Mostly Sunny</td>
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Cloud Cover (%) | Chance of Precip. (%)

source: wunderground.com

Flight Collection Plan for 6 May 2024

**Priority:** NIS Troubleshooting and Digitizer Data Evaluation

**Flyority 1**
Collection Area: Table Mountain Radiometric Calibration
Flight Plan Name: D10_R10E_Radiometric_Cal_Table_Mtn_v2_PRM.xml
45° On-station Time: 16:10 UTC / 09:10 L
Additional Considerations: Ground should be dry.

**Flyority 2**
Collection Area: Black Forest Waveform Range Test Flight
Flight Plan Name: D10_BLKF_Black_Forest_v4_PRM.xml
On-Station Time: Daylight – No solar angle restrictions.
Flyority 3
Collection Area: NIS Offset Flight
Flight Plan Name: D10_O10C_NIS_Offset_v3_PRM.xml
35° On-station Time: 15:20 UTC / 08:20

Flight Crew
TBD