Date: 2024-03-28
Flight Campaign ID: P3C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Aircraft: N821AR

Domain: 00 (Training & Calibration)
Sites Flown: V10C (Boulder City South)
Days left in Domain: 0

Report Author: Mitch
Lidar Operators: Mitch  Flight Hours: 00:04, 00:32
Spectrometer Operators: Cameron  Hours until maintenance: 120.63
Pilots: Will, Justin  GPS Instruments: AOP_KBDU
Adt'l Flight Crew: Andrew  Ground Crew: Matt, Elissa

Summary
Overcast skies prevented any attempts at completing one of our remaining calibration flights, so the crew flew a quick recertification flight instead. Andrew joined to help troubleshoot some connectivity issues we’ve been having in addition to being refreshed on in air lidar and NIS collections. Post flight the plane was packed and readied for an early departure tomorrow morning in order to beat a heavy low-pressure system that will be making its way across the western US this weekend.

Concerns
None

Comments
- This concludes the first portion of payload three calibration flights. The Otter will return to Boulder following SJER flights in Fresno to complete cal flights in April.
- Mitch is recertified on Lidar, Cameron is recertified on the NIS, Elissa is recertified on Ground Activities, and Andrew is recertified as third seat observer.
- In flight network connectivity issues were quickly resolved by Andrew. A misguided and forgotten ethernet cable was the culprit (i.e. user installation error).
- V10C Riaquire project file refused to open due to incorrect “calibration values”. An older laser configuration plan for V10C was used instead. A new plan file was quickly created by John and will be tested in flight once the plane returns to Boulder in April.

Daily Coverage
Estimated Cloud Cover Key

<table>
<thead>
<tr>
<th></th>
<th>Green: 0-10%</th>
<th>Yellow: 11-50%</th>
<th>Red: &gt;50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>D00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V10C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Line #</th>
<th>Lidar</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>✓</td>
</tr>
</tbody>
</table>
Spectrometer ✓ ✓
Camera ✓ ✓
Cloud Cover ✓

Total number of lines flown: 2

Flight Screenshots

Pictures
Below: A lot of snow melt along the front range, but still quite a bit of snow in the mountains.
Cumulative Domain Coverage

D00|B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
</table>
Flown: 0% (0/20)
Green: 0% (0/20)
Yellow: 0% (0/20)
Red: 0% (0/20)

D00|H10C (NEON Headquarters Lidar Test - Riegl)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
</table>
Flown: 100% (4/4)
Green: 0% (0/4)
Yellow: 100% (4/4)
Red: 0% (0/4)
D00|N10D (Nominal Runway at KBDU - Riegl)

Flown: 86% (24/28)
Green: 0% (0/28)
Yellow: 0% (0/28)
Red: 86% (24/28)

D00|O10B (NIS Offset - Riegl)

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

D00|R10C (Table Mountain Radiometric Calibration - Riegl)

Flown: 0% (0/5)
Green: 0% (0/5)
Yellow: 0% (0/5)
Red: 0% (0/5)

D00|R10D (Boulder Airport Radiometric Calibration)

Flown: 0% (0/5)
Green: 0% (0/5)
Yellow: 0% (0/5)
Red: 0% (0/5)

D00|V10C (Boulder City South)

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

D00|W10C (Wiggle Timing Test - Riegl)

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

**Boulder, CO**

<table>
<thead>
<tr>
<th>Day</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri 3/29</td>
<td>49°</td>
<td>33°F</td>
</tr>
</tbody>
</table>

- PM Showers
- Cloud Cover (%)
- Chance of Precip. (%)
- 0.15 in

**Fresno, CA**

<table>
<thead>
<tr>
<th>Day</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri 3/29</td>
<td>61°</td>
<td>49°F</td>
</tr>
<tr>
<td>Sat 3/30</td>
<td>64°</td>
<td>47°F</td>
</tr>
<tr>
<td>Sun 3/31</td>
<td>67°</td>
<td>46°F</td>
</tr>
<tr>
<td>Mon 4/1</td>
<td>71°</td>
<td>47°F</td>
</tr>
<tr>
<td>Tue 4/2</td>
<td>77°</td>
<td>50°F</td>
</tr>
<tr>
<td>Wed 4/3</td>
<td>81°</td>
<td>53°F</td>
</tr>
</tbody>
</table>

- PM Rain: 0.58 in
- Showers: 0.04 in
- Partly Cloudy: 0 in
- Sunny: 0 in
- Sunny: 0 in
- Sunny: 0 in

*source: wunderground.com*

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## Flight Collection Plan for 29 March 2024

Transit to Fresno, CA for D17-SJER Collects

Flight Crew: Elissa