Date: 2022-04-19  
Flight Campaign ID: P1C1  
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO  
Aircraft: N331AR  

Domain: 00 (Training & Calibration)  
Sites Flown: W10D (Wiggle Timing Test - Galaxy), H10D (NEON Headquarters Lidar Validation - Galaxy), N10F (Nominal Runway at KBDU - Galaxy)  
Days left in Domain: 13  

Report Author: Mitch  
Lidar Operators: Mitch, Cameron  
Spectrometer Operators: Matt, Abe  
Pilots: Justin, Stephen  
Ground Crew: Abe, Nick  

Flight Hours: 01:05 + 00:30  
Hours until maintenance: 122.22  

GPS Instruments: AOP_KBDU  

Summary  
First day of flights for Payload 1. Two flights were conducted. First flight served as a functional check flight, flying the Wiggle and Lidar HQ. With increased winds in the afternoon, the second flight served primarily as a recertification flight using the nominal runway flight plan.  

Concerns  
QA for this morning’s Cal Flight (2022041914) failed after extraction.  

Comments  
Mitch and Cam were both recertified on the Galaxy system.  
Matt was recertified on the NIS.  
Elissa was certified as a certifier.  

Daily Coverage  
Estimated Cloud Cover Key  

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

D00|H10D  
| Line # | 1 | 2 | 3 | 4  
| Lidar | ✓ | ✓ | ✓ | ✓  
| Spectrometer | ✓ | ✓ | ✓ | ✓  
| Camera | ✓ | ✓ | ✓ | ✓  
| Cloud Cover |  
| Total number of lines flown: 4  

D00|W10D  
| Line # | 1 | 2  
| Lidar | ✓ | ✓  

Spectrometer ✓ ✓  
Camera ✓ ✓  
Cloud Cover  

Total number of lines flown: 2

D00|N10F

<table>
<thead>
<tr>
<th>Line #</th>
<th>21</th>
<th>22</th>
<th>23</th>
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</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Total number of lines flown: 3

Flight Screenshots

Wiggle above, Lidar HQ below
## Cumulative Domain Coverage

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

<table>
<thead>
<tr>
<th>Flown: 0% (0/20)</th>
<th>Green: 0% (0/20)</th>
<th>Yellow: 0% (0/20)</th>
<th>Red: 0% (0/20)</th>
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**D00|BLKF (Black Forest Waveform Range Test - Galaxy)**

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<th>Yellow: 0% (0/21)</th>
<th>Red: 0% (0/21)</th>
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**D00|D10C ()**

<table>
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<tr>
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<th>Green: 0% (0/2)</th>
<th>Yellow: 0% (0/2)</th>
<th>Red: 0% (0/2)</th>
</tr>
</thead>
</table>
D00|H10D (NEON Headquarters Lidar Validation - Galaxy)

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

D00|N10F (Nominal Runway at KBDU - Galaxy)

Flown: 8% (3/37)
Green: 0% (0/37)
Yellow: 0% (0/37)
Red: 8% (3/37)

D00|O10C (NIS Offset - Galaxy)

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

D00|R10E (Table Mountain Radiometric Calibration - Galaxy)

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

D00|W10D (Wiggle Timing Test - Galaxy)

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

Weather Forecast

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<tbody>
<tr>
<td>70°</td>
<td>43°F</td>
<td>76°</td>
<td>47°F</td>
<td>79°</td>
<td>43°F</td>
<td>57°</td>
</tr>
</tbody>
</table>

Sunny 0 in | Sunny 0 in | Partly Cloudy 0.07 in | PM Showers 0.09 in | Mostly Cloudy 0 in | Mostly Sunny 0 in | Mostly Sunny 0 in |

source: wunderground.com
Flight Collection Plan for 20 April 2022

**Flyority 1**
Collection Area: Table Mountain Radiometric Calibration
Flight Plan Name: D10_R10E_Radiometric_Cal_Table_Mtn_v1_PRM.xml
45° On-station Time: 1630 UTC / 1030 L
40° On-station Time: 1600 UTC / 1000 L
Additional Considerations: Ground should be dry.

**Flyority 2**
Collection Area: Boresight Calibration – Greeley, CO
Flight Plan Name: D10_B10F_Boresight_Geocal_v9_PRM.xml
30° On-station Time: 1500 UTC / 0900 L
Additional Considerations: No recent snowfall, clear roofs required.

**Flyority 3**
Collection Area: Nominal Runway Survey Flight Plan
Name: D10_N10F_Nominal_Rnwy_v10_PRM.xml
On-Station Time: Daylight – No solar angle restrictions.
Additional Considerations: Runway should not be wet or snow covered.

**Flyority 4**
Collection Area: NIS Offset Flight
Flight Plan Name: D10_O10C_NIS_Offset_v2_PRM.xml
35° On-station Time: 1530 UTC / 0930 L

**Flight Crew:**
1st Flight: Abe (Lidar), John (NIS), Cam (Trainer), Matt (Ground)
2nd Flight (If conditions allow): Matt (Lidar), Mike (NIS), Abe (Trainer), Cam/Mitch (Ground)