Date: 2021-04-25
Flight Campaign ID: P1C2
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Aircraft: N331AR

Domain: 00 (Training & Calibration)
Sites Flown: O10C (NIS Offset - Galaxy)
Days left in Domain: 3

Report Author: Mitch Haynes
Lidar Operators: Mitch Haynes
Flight Hours: 00:23, 00:23, 00:30, 00:25, 00:22
Spectrometer Operators: Elissa Barris
Hours until maintenance: 99.87
Pilots: Will Mathews, Justin Eddington
GPS Instruments: 05 - KBDU
Ground Crew: John Adler

Summary
Crew was able to take advantage of clear skies this morning and knock out the NIS Offset before rapidly building cumulus clouds got in the way.

Concerns
- Internal storage on the permanent AOP GPS station at KBDU filled up at some point during the day yesterday. A temporary GPS Unit (05) was set up prior to today’s flight while old data from was being cleared off the unit.

Comments
- Ian has requested a second round of Black Forest collects to test the refurbished digitizer installed on Friday. This will be the last remaining calibration flight for P1.
- Science Collects over D13 site MOAB set to begin on Thursday, 4/29.
- SmartNet terms of service have shifted from a free to a paid service. Science is aware, and note that unless we opt for the paid service, GPS requirements for Black Forest for this second collect will need to be relaxed.

Daily Coverage
Estimated Cloud Cover Key

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

D00\O10C

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

Total number of lines flown: 10
Flight Screenshots

Cumulative Domain Coverage

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

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

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

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
Flown: 100% (21/21)
Green: 0% (0/21)
Yellow: 100% (21/21)
Red: 0% (0/21)

D00|H10D (NEON Headquarters Lidar Validation - Galaxy)

| 1 | 2 | 3 | 4 |
---|---|---|---|
Flown: 100% (4/4)
Green: 100% (4/4)
Yellow: 0% (0/4)
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 |
---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
Flown: 100% (21/21)
Green: 0% (0/21)
Yellow: 100% (21/21)
Red: 0% (0/21)
Flown: 100% (35/35)
Green: 0% (0/35)
Yellow: 0% (0/35)
Red: 100% (35/35)

D00|O10C (NIS Offset - Galaxy)

1 2
Flown: 100% (2/2)
Green: 100% (2/2)
Yellow: 0% (0/2)
Red: 0% (0/2)

D00|R10E (Table Mountain Radiometric Calibration - Galaxy)

1 2 3 4 5
Flown: 100% (5/5)
Green: 100% (5/5)
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
Flown: 38% (11/29)
Green: 14% (4/29)
Yellow: 0% (0/29)
Red: 24% (7/29)

D00|W10D (Wiggle Timing Test - Galaxy)

1 2
Flown: 100% (2/2)
Green: 100% (2/2)
Yellow: 0% (0/2)
Red: 0% (0/2)

Weather Forecast

<table>
<thead>
<tr>
<th>Mon 4/26</th>
<th>Tue 4/27</th>
<th>Wed 4/28</th>
<th>Thu 4/29</th>
<th>Fri 4/30</th>
<th>Sat 5/1</th>
<th>Sun 5/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>74°</td>
<td>45°F</td>
<td>55°</td>
<td>40°F</td>
<td>58°</td>
<td>42°F</td>
<td>66°</td>
</tr>
</tbody>
</table>

Mostly Sunny
Thunderstorms
AM Showers
Sunny
Mostly Sunny
Partly Cloudy
Partly Cloudy

0 in
0.82 in
0.06 in
0 in
0 in
0 in
0.14 in

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

source: wunderground.com

Flight Collection Plan for 26 April 2021
Flyority 1
Collection Area: Black Forest Waveform Range Test Flight
Flight Plan Name: D10_BLKF_Black_Forest_v3_PRM.xml
On-station Time: Daylight – No solar angle restrictions.
Additional Considerations: Snow on ground / trees okay.

Crew: Elissa (Lidar), Mike (NIS), Matt (Ground)