Date: 2023-08-14
Flight Campaign ID: P3C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO, Goodland Regional Airport - Goodland, KS
Aircraft: N934MU

Domain: 10, 13 (Training & Calibration), 10 (Central Plains), 13 (Southern Rockies & Colorado Plateau)
Sites Flown: ARIK (Arikaree River)
Days left in Domain: 12

Report Author: Cameron
Lidar Operators: Cameron    Flight Hours: 03:22:00, 03:06:00
Spectrometer Operators: Mitch    Hours until maintenance: 81.90
Pilots: Will, Justin    GPS Instruments: 02 - ARIK, AOP_KBDU
Ground Crew: Matt

Summary
With cloudy conditions over the Rockies this morning, the crew shifted focus to the East. We took advantage of clear skies over ARIK and collected the entire site in nominal sky conditions. We refueled in Goodland, KS midway through the flight before completing the P2 Box.

Concerns
- None

Comments
- None

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>

D10 | ARIK

<table>
<thead>
<tr>
<th>Line #</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>
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<th>18</th>
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<tr>
<td>Spectrometer</td>
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<td>✓</td>
</tr>
</tbody>
</table>

Total number of lines flown: 34
Flight Screenshots

Pictures

A photo taken while flying over the ARIK site today.
Cumulative Domain Coverage

D10 | ARIK (Arikaree River)
---
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
Flown: 97% (34/35)
Green: 97% (34/35)
Yellow: 0% (0/35)
Red: 0% (0/35)

D10 | RMNP (Rocky Mountain National Park)
---
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 38 39
Flown: 59% (23/39)
Green: 36% (14/39)
Yellow: 21% (8/39)
Red: 3% (1/39)

D13 | NIWO (Niwot Ridge Mountain Research Station)
---
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 38 39 40
41 42 43 44 45 46 47 48 49 50 51 52
Flown: 4% (2/52)
Green: 0% (0/52)
Yellow: 4% (2/52)
Red: 0% (0/52)

D13 | WLOU (West St. Louis Creek)
---
1 2 3 4 5 6 7 8 9 10 11 12 13 14
Flown: 0% (0/14)
Green: 0% (0/14)
Yellow: 0% (0/14)
Red: 0% (0/14)

Weather Forecast
Nederland, CO (NIWO)

<table>
<thead>
<tr>
<th>Tue 8/15</th>
<th>Wed 8/16</th>
<th>Thu 8/17</th>
<th>Fri 8/18</th>
<th>Sat 8/19</th>
<th>Sun 8/20</th>
<th>Mon 8/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>78°</td>
<td>58°F</td>
<td>77°</td>
<td>56°F</td>
<td>73°</td>
<td>57°F</td>
<td>75°</td>
</tr>
<tr>
<td>Mostly Sunny</td>
<td>PM</td>
<td>Thunderstorms</td>
<td>PM</td>
<td>Thunderstorms</td>
<td>PM</td>
<td>Thunderstorms</td>
</tr>
<tr>
<td>0 in</td>
<td>0.04 in</td>
<td>0.03 in</td>
<td>0.06 in</td>
<td>0.1 in</td>
<td>0 in</td>
<td>0.07 in</td>
</tr>
</tbody>
</table>
### Allenspark, CO (RMNP)

<table>
<thead>
<tr>
<th>Day</th>
<th>Temperature (°F)</th>
<th>Weather</th>
<th>Cloud Cover (%)</th>
<th>Chance of Precip. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue 8/15</td>
<td>76°</td>
<td>56°F</td>
<td>Mostly Sunny</td>
<td>0 in</td>
</tr>
<tr>
<td>Wed 8/16</td>
<td>76°</td>
<td>55°F</td>
<td>PM</td>
<td>0.04 in</td>
</tr>
<tr>
<td>Thu 8/17</td>
<td>73°</td>
<td>57°F</td>
<td>Isolated</td>
<td>0.02 in</td>
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<tr>
<td>Fri 8/18</td>
<td>74°</td>
<td>56°F</td>
<td>Thunderstorms</td>
<td>0.08 in</td>
</tr>
<tr>
<td>Sat 8/19</td>
<td>72°</td>
<td>54°F</td>
<td>Thunderstorms</td>
<td>0.08 in</td>
</tr>
<tr>
<td>Sun 8/20</td>
<td>73°</td>
<td>55°F</td>
<td>Thunderstorms</td>
<td>0.06 in</td>
</tr>
<tr>
<td>Mon 8/21</td>
<td>71°</td>
<td>54°F</td>
<td>Thunderstorms</td>
<td>0.07 in</td>
</tr>
</tbody>
</table>

### Fraser, CO (WLOU)

<table>
<thead>
<tr>
<th>Day</th>
<th>Temperature (°F)</th>
<th>Weather</th>
<th>Cloud Cover (%)</th>
<th>Chance of Precip. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue 8/15</td>
<td>77°</td>
<td>52°F</td>
<td>Mostly Sunny</td>
<td>0 in</td>
</tr>
<tr>
<td>Wed 8/16</td>
<td>75°</td>
<td>51°F</td>
<td>Mostly Sunny</td>
<td>0 in</td>
</tr>
<tr>
<td>Thu 8/17</td>
<td>75°</td>
<td>52°F</td>
<td>Isolated</td>
<td>0.02 in</td>
</tr>
<tr>
<td>Fri 8/18</td>
<td>73°</td>
<td>50°F</td>
<td>Thunderstorms</td>
<td>0.05 in</td>
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<tr>
<td>Sat 8/19</td>
<td>71°</td>
<td>50°F</td>
<td>Thunderstorms</td>
<td>0.08 in</td>
</tr>
<tr>
<td>Sun 8/20</td>
<td>74°</td>
<td>51°F</td>
<td>Partly Cloudy</td>
<td>0 in</td>
</tr>
<tr>
<td>Mon 8/21</td>
<td>73°</td>
<td>51°F</td>
<td>Thunderstorms</td>
<td>0.05 in</td>
</tr>
</tbody>
</table>

source: wunderground.com

### Flight Collection Plan for 14th August 2023

**Flyority 1**
- **Collection Area:** Niwot Ridge Mountain Research Station (NIWO)
- **Flight Plan Name:** D13_NIWO_C1_P1_v5_Q780
- **On-Station Time:** 15:50 UTC / 09:50 L

**Flyority 2**
- **Collection Area:** Rocky Mountain National Park (RMNP)
- **Flight Plan Name:** D10_RMNP_R2_P1_v2_Q780
- **On-Station Time:** 15:50 UTC / 09:50 L
Flyority 3
Collection Area: West St. Louis Creek (WLOU)
Flight Plan Name: D13_WLOU_A1_P1_Q780
On-Station Time: 15:50 UTC / 09:50 L

Flyority 4
Collection Area: Arikaree River (ARIK)
Flight Plan Name: D10_ARIK_A1_P2_v3_Q780
On-Station Time: 15:40 UTC / 09:40 L

Crew: Matt (Lidar), Cam (NIS), Mitch (Ground)