Date: 2023-08-11
Flight Campaign ID: P3C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO
Aircraft: N934MU

Domain: 10 (Central Plains), 13 (Southern Rockies & Colorado Plateau)
Sites Flown: RMNP (Rocky Mountain National Park), NIWO (Niwot Ridge Mountain Research Station)
Days left in Domain: 15

Report Author: Matt
Lidar Operators: Matt
Spectrometer Operators: Mitch
Pilots: Justin, Jon
Ground Crew: Nick

Flight Hours: 02:24
Hours until maintenance: 88.37
GPS Instruments: AOP_KBDU, AOP_NIWO

Summary
Cloud conditions in the Niwot and Rocky Mountain flight boxes looked promising so the crew took to the skies and collected 12 lines and a crosstrip in green/yellow conditions at the RMNP site.

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|RMNP

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

Total number of lines flown: 12
Flight Screenshots

LIDAR – RMNP

NIS- RMNP

Pictures

Indian Peaks

NEON RMNP tower site

Cumulative Domain Coverage

D10|ARIK (Arikaree River)

<table>
<thead>
<tr>
<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>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
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<td>34</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Flown: 0% (0/35)
Green: 0% (0/35)
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>Sat 8/12</th>
<th>Sun 8/13</th>
<th>Mon 8/14</th>
<th>Tue 8/15</th>
<th>Wed 8/16</th>
<th>Thu 8/17</th>
<th>Fri 8/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>71°F</td>
<td>64°F</td>
<td>67°F</td>
<td>77°F</td>
<td>76°F</td>
<td>76°F</td>
<td>78°F</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>Partly Cloudy</td>
<td>Mostly Sunny</td>
<td>Partly Cloudy</td>
<td>Mostly Sunny</td>
<td>Mostly Sunny</td>
</tr>
<tr>
<td>Thunderstorms</td>
<td>Thunderstorms</td>
<td>0.04 in</td>
<td>0.08 in</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
</tr>
</tbody>
</table>

Allenspark, CO (RMNP)

<table>
<thead>
<tr>
<th>Sat 8/12</th>
<th>Sun 8/13</th>
<th>Mon 8/14</th>
<th>Tue 8/15</th>
<th>Wed 8/16</th>
<th>Thu 8/17</th>
<th>Fri 8/18</th>
</tr>
</thead>
<tbody>
<tr>
<td>68°F</td>
<td>63°F</td>
<td>66°F</td>
<td>76°F</td>
<td>75°F</td>
<td>75°F</td>
<td>77°F</td>
</tr>
<tr>
<td>Isolated</td>
<td>PM</td>
<td>Partly Cloudy</td>
<td>Mostly Sunny</td>
<td>Partly Cloudy</td>
<td>Mostly Sunny</td>
<td>Mostly Sunny</td>
</tr>
<tr>
<td>Thunderstorms</td>
<td>Thunderstorms</td>
<td>0.05 in</td>
<td>0.13 in</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
</tr>
</tbody>
</table>
Flight Collection Plan for 12th 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: Nick (Lidar), Matt (NIS), Mitch (Ground)