Payload 3 Daily Flight Report

Date: 2023-08-09
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)
Days left in Domain: 0

Report Author: Nick
Lidar Operators: Nick
Flight Hours: 01:10
Spectrometer Operators: Matt
Hours until maintenance: 90.77
Pilots: Justin, Jon
GPS Instruments: AOP_KBDU, AOP_NIWO
Ground Crew: Mitch

Summary
Payload 3 was greeted with mostly clear skies. The crew surveyed NIWO before shifting to RMNP for clouds. 4 lines were flown at RMNP before clouds built, casting shadows in the collection area. NIWO was reassessed on the transit back and deemed to be still outside green sky conditions. Skies were evaluated later in the day but remained outside green conditions.

Concerns
None.

Comments
GPS-02 is deployed for ARIK. Connectivity is sparse and daily uploads are not occurring. GPS is receiving and recording normally.

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>1</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td></td>
<td></td>
<td></td>
<td>Green</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

Total number of lines flown: 5
Clouds over NIWO. Photo courtesy of Matt.
Cumulative Domain Coverage

D10|ARIK (Arikaree River)

Flown: 0% (0/35)
Green: 0% (0/35)
Yellow: 0% (0/35)
Red: 0% (0/35)

D10|RMNP (Rocky Mountain National Park)

Flown: 28% (11/39)
Green: 21% (8/39)
Yellow: 8% (3/39)
Red: 0% (0/39)

D13|NIWO (Niwot Ridge Mountain Research Station)

Flown: 4% (2/52)
Green: 0% (0/52)
Yellow: 4% (2/52)
Red: 0% (0/52)

D13|WLOU (West St. Louis Creek)

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>Thu 8/10</th>
<th>Fri 8/11</th>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>74°</td>
<td>55°F</td>
<td>Mostly Sunny</td>
<td>Mostly Sunny</td>
<td>73°C</td>
<td>57°F</td>
<td>PM Thunderstorms</td>
</tr>
<tr>
<td>0 in</td>
<td>0 in</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>75°</td>
<td>55°F</td>
<td>Mostly Sunny</td>
<td>PM Showers</td>
<td>69°</td>
<td>52°F</td>
<td>PM Thunderstorms</td>
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<tr>
<td>0.02 in</td>
<td>0.13 in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0 in</td>
</tr>
<tr>
<td>74°</td>
<td>55°F</td>
<td>74°</td>
<td>55°F</td>
<td>74°</td>
<td>55°F</td>
<td>74°</td>
</tr>
<tr>
<td>0.02 in</td>
<td>0.02 in</td>
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</tbody>
</table>
Flight Collection Plan for August 10th 2023

Flyority 1
Collection Area: Niwot Ridge Mountain Research Station (NIWO)
Flight Plan Name: D13_NIWO_C1_P1_v5_Q780
On-Station Time: 15:40 UTC / 09:40 L

Flyority 2
Collection Area: Rocky Mountain National Park (RMNP)
Flight Plan Name: D10_RMNP_R2_P1_v2_Q780
On-Station Time: 15:40 UTC / 09:40 L

Flyority 3
Collection Area: West St. Louis Creek (WLOU)
Flight Plan Name: D13_WLOU_A1_P1_Q780
On-Station Time: 15:40 UTC / 09:40 L

Flyority 4
Collection Area: Arikaree River (ARIK)
Flight Plan Name: D10_ARIK_A1_P2_v3_Q780
On-Station Time: 15:30 UTC / 09:30 L

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