Date: 2021-09-12  
Flight Campaign ID: P3C1  
Airport, FBO ID, City: Scottsdale Municipal Airport (KSDL) - Scottsdale, AZ, Yuma International Airport (KNYL) - Yuma, AZ  
Aircraft: N615AR  

Domain: Cottonwood AA Project  
Sites Flown: CTWD_1, CTWD_2, CTWD_3  
Days left in Domain: TBD  

Report Author: Matt Devoe  
Lidar Operators: Matt Devoe  
Spectrometer Operators: Abe Morrison  
Pilots: Will Mathews, Scott Hayward  

Flight Hours: 02:42:00, 01:44:00  
Hours until maintenance: 22.93  
GPS Instruments: 06 - KSDL  

Summary  
Clear skies over the Cottonwood assignable asset project allowed the crew to collect the majority of the Yuma loop in green conditions. Lines 8 and 9 were flown under yellow conditions.  

Concerns  
None  

Comments  
Lines 8 and 9 will be attempted at the end of the Aqua Fria loop per the PI's guidance.  

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>

CTWD_3  

<table>
<thead>
<tr>
<th>Line #</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total number of lines flown: 4  

CTWD_1  

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

Total number of lines flown: 9

CTWD_2

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

Total number of lines flown: 1

Flight Screenshot
Cumulative Domain Coverage

**CTWD_1 ()**

- Flown: 100% (9/9)
- Green: 78% (7/9)
- Yellow: 22% (2/9)
- Red: 0% (0/9)

**CTWD_2 ()**

- Flown: 100% (1/1)
- Green: 100% (1/1)
- Yellow: 0% (0/1)
- Red: 0% (0/1)
Weather Forecast

Luke AFB, AZ (Yuma flt. plan, Lines 8 and 9)

<table>
<thead>
<tr>
<th></th>
<th>Mon 9/13</th>
<th>Tue 9/14</th>
<th>Wed 9/15</th>
<th>Thu 9/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>109°F / 79°F</td>
<td>107°F / 77°F</td>
<td>106°F / 76°F</td>
<td>105°F / 76°F</td>
</tr>
<tr>
<td>Conditions</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
</tr>
<tr>
<td>Precipitation</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
</tr>
</tbody>
</table>

Scottsdale, AZ (Agua Fria South Flight Box)

<table>
<thead>
<tr>
<th></th>
<th>Mon 9/13</th>
<th>Tue 9/14</th>
<th>Wed 9/15</th>
<th>Thu 9/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>108°F / 80°F</td>
<td>107°F / 79°F</td>
<td>106°F / 78°F</td>
<td>105°F / 78°F</td>
</tr>
<tr>
<td>Conditions</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
</tr>
<tr>
<td>Precipitation</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
<td>0 in</td>
</tr>
</tbody>
</table>
### Flight Collection Plan for September 13th 2021

**Flyority 1**  
**Collection Area:** Agua Fria 1000m Flight Line Flight Plan  
**Flight Plan Name:** D14_CTWD_AguaFria_FL_1000m_v1  
**Solar Angle Time:** 16:40 UTC  

**Flyority 2**  
**Collection Area:** Agua Fria 500m Flight Box South Flight Plan  
**Flight Plan Name:** D14_CTWD_AguaFria_FBS_500m_v1  
**Solar Angle Time:** 16:40 UTC  

**Flyority 3**  
**Collection Area:** Agua Fria 500m Flight Box North Flight Plan  
**Flight Plan Name:** D14_CTWD_AguaFria_FBN_1000m_v1  
**Solar Angle Time:** 16:40 UTC  

**Flyority 4**  
**Collection Area:** Yuma 1000m Flight Box North Flight Plan- Lines 8-9  
**Flight Plan Name:** D14_CTWD_YUMA_FB_N_1000m_v3  
**Solar Angle Time:** 16:40 UTC  

**Crew:** Abe Morrison, Matt DeVoe