Date: 2022-07-12
Flight Campaign ID: P1C1
Airport, FBO ID, City: Portland-Hillsborough Airport (KHIO) - Hillsboro, OR
Aircraft: N331AR

Domain: 16 (Pacific Northwest)
Sites Flown: ABBY (Abby Road), WREF_P1 (Wind River Experimental Forest Priority 1)
Days left in Domain: 3

Report Author: Abe
Lidar Operators: Abe
Spectrometer Operators: Mike
Pilots: Robbie, Vince
Ground Crew: Mitch

Flight Hours: 04:34
Hours until maintenance: 107.87
GPS Instruments: 04 - FBO - KHIO, AOP_ABBY, AOP_WREF

Summary
Another clear sky morning allowed the crew to conduct more surveys at the ABBY and WREF sites in “Green” sky conditions. 2 lines and a cross strip were collected at ABBY, which finishes that flight box. 39 lines and a cross strip were flown at the WREF site. It was necessary to return to the airport for fuel, and during that period the clouds started to build beyond “green” conditions. No more flights were conducted.

Concerns
-The uncontrollable KVM trackball fault from yesterday did not re-appear today.

Comments
-The malfunctioning GPU was replaced yesterday with a fully functional one from the Boulder hangar. All appears to be normal now with that situation.
-Abe departs early tomorrow morning.
-Pilot Robbie departs today and will be replaced by Jeremy.

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>

D16|ABBY

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

Total number of lines flown: 2
### Flight Screenshots

**Lidar**

**NIS**

**ABBY**

![Flight Screenshots](https://via.placeholder.com/150)

**WREF**

![Flight Screenshots](https://via.placeholder.com/150)

### Cumulative Domain Coverage

**D16|ABBY (Abby Road)**

<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>
<th>10</th>
<th>11</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>
</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Total number of lines flown: 39**

**D16|MCRA (McRae Creek)**

<table>
<thead>
<tr>
<th>Line #</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
<th>38</th>
<th>39</th>
<th>40</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Flown:** 100% (44/44)
**Green:** 100% (44/44)
**Yellow:** 0% (0/44)
**Red:** 0% (0/44)
D16|N16A (D16 Nominal Runway)

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

D16|WREF_P1 (Wind River Experimental Forest Priority 1)

- Flown: 68% (39/57)
- Green: 68% (39/57)
- Yellow: 0% (0/57)
- Red: 0% (0/57)

D16|WREF_P2 (Wind River Experimental Forest Priority 2)

- Flown: 52% (11/21)
- Green: 0% (0/21)
- Yellow: 33% (7/21)
- Red: 19% (4/21)

Weather Forecast

**Hillsboro, OR**

<table>
<thead>
<tr>
<th>Wed 7/13</th>
<th>Thu 7/14</th>
<th>Fri 7/15</th>
<th>Sat 7/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partly Cloudy</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Partly Cloudy</td>
</tr>
<tr>
<td>81°F</td>
<td>85°F</td>
<td>81°F</td>
<td>50°F</td>
</tr>
</tbody>
</table>

**Carson, WA (WREF)**

<table>
<thead>
<tr>
<th>Wed 7/13</th>
<th>Thu 7/14</th>
<th>Fri 7/15</th>
<th>Sat 7/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mostly Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Mostly Sunny</td>
</tr>
<tr>
<td>80°F</td>
<td>85°F</td>
<td>83°F</td>
<td>55°F</td>
</tr>
</tbody>
</table>

**McKenzie Bridge, OR (MCRA)**

<table>
<thead>
<tr>
<th>Wed 7/13</th>
<th>Thu 7/14</th>
<th>Fri 7/15</th>
<th>Sat 7/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partly Cloudy</td>
<td>Sunny</td>
<td>Sunny</td>
<td>Sunny</td>
</tr>
<tr>
<td>83°F</td>
<td>86°F</td>
<td>83°F</td>
<td>56°F</td>
</tr>
</tbody>
</table>

Source: wunderground.com
Flight Collection Plan for July 13, 2022

Flyority 1
Collection Area: Wind River Experimental Forest (WREF) – Priority 1 Flight Box
Flight Plan Name: D16_WREF_C1_P1_P2_v3_PRM.xml
On-station Time: 1640 UTC / 0940 L

Flyority 2
Collection Area: McRae Creek (MCRA)
Flight Plan Name: D16_MCRA_A2_P1_v2_PRM.xml
On-station Time: 1640 UTC / 0940 L

Flyority 3
Collection Area: Wind River Experimental Forest (WREF) – Priority 2 Flight Box
Flight Plan Name: D16_WREF_C1_P1_P2_v3_PRM.xml
On-station Time: 1640 UTC / 0940 L

Crew: Mike (Lidar), Mitch (NIS)