Date: 2022-08-12
Flight Campaign ID: P3C1
Airport, FBO ID, City: Nashua Airport (KASH) - Nashua, NH
Aircraft: N70AR

Domain: 01 (Northeast)
Sites Flown: HARV_P2 (Harvard Forest Priority 2), HOPB (Hop Brook)
Days left in Domain: 14

Report Author: Cameron
Lidar Operators: Cameron  Flight Hours: 02:31
Spectrometer Operators: John  Hours until maintenance: 73.50
Pilots: Justin, Magnus  GPS Instruments: 06 - KASH

Summary
The crew took advantage of decent weather and collected 10 lines at HOPB and 7 lines at HARV_P2 in Yellow sky conditions.

Concerns
- The GPU at the airport had voltage fluctuation issues today. (24v – 31v). The UPS batteries were draining and charging in conjunction with the variations. We will continue to monitor.
- A phantom NIS chamber spike during the flight today. The pressure went from 1e-8 to 1e-4. The chamber eventually returned to normal pressure after about 30 minutes.

Comments
- None

Daily Coverage

Estimated Cloud Cover Key

| Green: 0-10% | Yellow: 11-50% | Red: >50% |

D01|HOPB

<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>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
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<tr>
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<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>
</tr>
<tr>
<td>Cloud Cover</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

Total number of lines flown: 10
<table>
<thead>
<tr>
<th>Line #</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Spectrometer</td>
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<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>
</tr>
<tr>
<td>Cloud Cover</td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Total number of lines flown: 7

Flight Screenshots
A nice day over the HOPB and HARV_P2 flight boxes!

**Cumulative Domain Coverage**

**D01|BART** (Bartlett Experimental Forest)

| 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 |

Flown: 0% (0/36)
Green: 0% (0/36)
Yellow: 0% (0/36)
Red: 0% (0/36)

**D01|HARV_P1** (Harvard Forest Priority 1)

<table>
<thead>
<tr>
<th>30</th>
<th>31</th>
<th>32</th>
<th>33</th>
<th>34</th>
<th>35</th>
<th>36</th>
<th>37</th>
</tr>
</thead>
</table>

Flown: 79% (23/29)
Green: 79% (23/29)
Yellow: 0% (0/29)
Red: 0% (0/29)

**D01|HARV_P2** (Harvard Forest Priority 2)

<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>
</tr>
</thead>
</table>

Flown: 100% (8/8)
Green: 0% (0/8)
Yellow: 100% (8/8)
Red: 0% (0/8)

**D01|HOPB** (Hop Brook)

<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>
</tr>
</thead>
</table>

Flown: 100% (10/10)
Green: 0% (0/10)
Yellow: 100% (10/10)
Red: 0% (0/10)
Flown: 0% (0/2)
Green: 0% (0/2)
Yellow: 0% (0/2)
Red: 0% (0/2)

### Weather Forecast
Petersham, MA (HARV)

<table>
<thead>
<tr>
<th>Sat 8/13</th>
<th>Sun 8/14</th>
<th>Mon 8/15</th>
<th>Tue 8/16</th>
<th>Wed 8/17</th>
<th>Thu 8/18</th>
<th>Fri 8/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>74°</td>
<td>52°F</td>
<td>Mostly Sunny</td>
<td>0 in</td>
<td>78°</td>
<td>55°F</td>
<td>Mostly Sunny</td>
</tr>
</tbody>
</table>

Bartlett, NH (BART)

<table>
<thead>
<tr>
<th>Sat 8/13</th>
<th>Sun 8/14</th>
<th>Mon 8/15</th>
<th>Tue 8/16</th>
<th>Wed 8/17</th>
<th>Thu 8/18</th>
<th>Fri 8/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>70°</td>
<td>52°F</td>
<td>Partly Cloudy</td>
<td>0 in</td>
<td>75°</td>
<td>55°F</td>
<td>Partly Cloudy</td>
</tr>
</tbody>
</table>

source: wunderground.com
Flight Collection Plan for 13 August 2022
Flyority 1:
Collection Area: Harvard Forest – Priority 1 (HARV_P1)
Flight Plan Name: D01_HARV_C1_P1_v3_Q780
On-station Time: 1340 UTC / 0940 L

Flyority 2:
Collection Area: Bartlett Experimental Forest (BART)
Flight Plan Name: D01_BART_R1_P1_v1_Q780
On-station Time: 1340 UTC / 0940 L

Flyority 3: If Green
Collection Area: Hop Brook (HOPB)
Flight Plan Name: D01_HOPB_A1_P1_v1_Q780
On-station Time: 1340 UTC / 0940 L

Flyority 4: If Green
Collection Area: Harvard Forest – Priority 2 (HARV_P2)
Flight Plan Name: D01_HARV_C1_P2_v3_Q780
On-station Time: 1340 UTC / 0940 L

Crew: John (lidar), Cam (NIS)