Payload 3 Daily Flight Report

Date: 2023-06-20
Flight Campaign ID: P3C1
Airport, FBO ID, City: Bismarck Municipal Airport (KBIS) - Bismarck, ND
Aircraft: N934MU

Domain: 09 (Northern Plains)
Sites Flown: WOOD_DCFS (Woodworth and Dakota Coteau Field School )
Days left in Domain: 13

Report Author: Cameron
Lidar Operators: Cameron
Flight Hours: 03:00
Spectrometer Operators: Abe
Hours until maintenance: 30.02
Pilots: Jeff, Jon
GPS Instruments: 02 - KBIS, AOP_WOOD

Summary
The crew had a narrow window to collect data this morning at the WOOD_DCFS site. Upon arriving we were greeted with hazy but blue skies. With winds gusting 30 – 60 mph, the pilots could not maintain data collection speed (97kts) from the Southern end flying North. The slowest speed achievable was ~127 kts. Thus, all lines flown today were from North to South. We were able to fly 8 priority lines in green conditions before clouds moved in.

Concerns
- None

Comments
- None

Daily Coverage

Estimated Cloud Cover Key

<table>
<thead>
<tr>
<th></th>
<th>Green: 0-10%</th>
<th>Yellow: 11-50%</th>
<th>Red: &gt;50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line #</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lidar</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spectrometer</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Camera</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cloud Cover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D09|WOOD_DCFS

Total number of lines flown: 9
Above: The crew towing the aircraft out of the hangar this morning!
Below: A view out the window while flying the WOOD_DCFS site today.
## Cumulative Domain Coverage

**D09 | NOGP (Northern Great Plains)**

| 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 |

Flown: 0% (0/26)  
Green: 0% (0/26)  
Yellow: 0% (0/26)  
Red: 0% (0/26)

**D09 | WOOD_DCFS (Woodworth and Dakota Coteau Field School)**

| 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 | 53 | 54 |

Flown: 17% (9/54)  
Green: 15% (8/54)  
Yellow: 2% (1/54)  
Red: 0% (0/54)

## Weather Forecast

### Bismarck, ND (NOGP)

<table>
<thead>
<tr>
<th>Date</th>
<th>High</th>
<th>Low</th>
<th>Weather Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 6/21</td>
<td>78°</td>
<td>60°F</td>
<td>Cloudy, 0.49 in</td>
</tr>
<tr>
<td>Thu 6/22</td>
<td>74°</td>
<td>58°F</td>
<td>AM Showers, 0.13 in</td>
</tr>
<tr>
<td>Fri 6/23</td>
<td>71°</td>
<td>59°F</td>
<td>Thunderstorms, 1.05 in</td>
</tr>
<tr>
<td>Sat 6/24</td>
<td>70°</td>
<td>56°F</td>
<td>Scattered Thunderstorms, 0.56 in</td>
</tr>
<tr>
<td>Sun 6/25</td>
<td>75°</td>
<td>55°F</td>
<td>AM Showers, 0.01 in</td>
</tr>
<tr>
<td>Mon 6/26</td>
<td>80°</td>
<td>56°F</td>
<td>Mostly Sunny, 0 in</td>
</tr>
<tr>
<td>Tue 6/27</td>
<td>78°</td>
<td>58°F</td>
<td>Partly Cloudy, 0.26 in</td>
</tr>
</tbody>
</table>

### Woodworth, ND (DCFS, WOOD)

<table>
<thead>
<tr>
<th>Date</th>
<th>High</th>
<th>Low</th>
<th>Weather Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed 6/21</td>
<td>76°</td>
<td>61°F</td>
<td>Scattered Thunderstorms, 0.7 in</td>
</tr>
<tr>
<td>Thu 6/22</td>
<td>72°</td>
<td>56°F</td>
<td>Thunderstorms, 0.24 in</td>
</tr>
<tr>
<td>Fri 6/23</td>
<td>71°</td>
<td>58°F</td>
<td>Thunderstorms, 0.81 in</td>
</tr>
<tr>
<td>Sat 6/24</td>
<td>71°</td>
<td>57°F</td>
<td>Scattered Thunderstorms, 0.61 in</td>
</tr>
<tr>
<td>Sun 6/25</td>
<td>73°</td>
<td>56°F</td>
<td>AM Showers, 0.03 in</td>
</tr>
<tr>
<td>Mon 6/26</td>
<td>79°</td>
<td>57°F</td>
<td>Mostly Sunny, 0 in</td>
</tr>
<tr>
<td>Tue 6/27</td>
<td>77°</td>
<td>59°F</td>
<td>Partly Cloudy, 0.18 in</td>
</tr>
</tbody>
</table>

Cloud Cover (%)  
Chance of Precip. (%)  

source: wunderground.com
Flight Collection Plan for June 21, 2023

Flyority 1
Collection Area: Woodworth (WOOD) – Dakota Coteau Field School (DCFS)
Flight Plan Name: D09_WOOD_DCFS_C1_P1_v4_Q780
On-Station Time: 15:00 UTC/ 10:00 L

Flyority 2
Collection Area: Northern Great Plains (NOGP)
Flight Plan Name: D09_NOGP_R2_P1_v2_Q780
On-Station Time: 15:10 UTC/ 10:10 L

Crew: Abe (Lidar), Cameron (NIS)