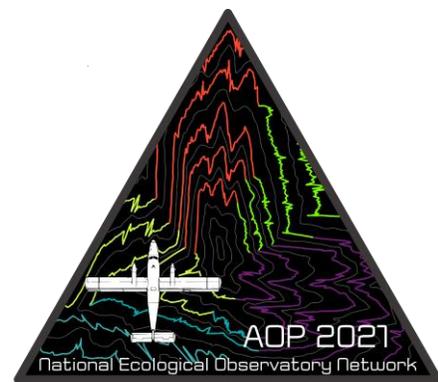




Payload 3 Daily Flight Report



Date: 2021-03-20

Flight Campaign ID: P3C1

Airport, FBO ID, City: Boulder Municipal Airport (KBDU) - Boulder, CO

Aircraft: N615AR

Domain: 00 (Training & Calibration)

Sites Flown: N10D (Nominal Runway Survey), H10C (NEON Headquarters Lidar Validation)

Days left in Domain: 9

Report Author: Nick Marusich

Lidar Operators: Abe Morrison, Nick Marusich

Spectrometer Operators: Nick Marusich, Elissa Barris

Pilots: Micah Hooegeveen, Justin Eddington

Adt'l Flight Crew: Cam Chapman, Mitch Haynes

Ground Crew: Mitch Haynes, Elissa Barris, Cameron Chapman, Abe Morrison

Flight Hours: 2:00 + 00:36

Hours until maintenance: 116.5

GPS Instruments: AOP_KBDU

Summary

The flight crew completed 2 calibration flights while completing cohort recertifications. The Nominal Runway and HQ Lidar Validation flights were completed. Dense fog in the Greeley area prevented attempts to collect the Boresight flight. With one cohort training complete, Sundays efforts will be placed in troubleshooting and Hg lamp collection before weather moves in for the remainder of next week.

Concerns

- Midas computer failed to boot again after tow out this morning. Ian has a hunch that this could be connected to the inrush current limiter that was recently implemented in the BSE to allow the MIDAS to be powered from the UPS-3000 instead of the AXE. Crew will continue to track these boot fails (and cabin temperatures when these fails occur).
- TrackAir had troubles again today displaying photos. Appears to be continuing to communicate with Snapshot and taking photos, but not displaying them

Comments

- Recertifications completed today:
 - Lidar: Abe Morrison, Nick Marusich
 - NIS: Nick Marusich
 - Ground: Cam Chapman, Mitch Haynes
- Daily reports generated correctly today.
- New Training Flight plans have been created by John to see if this fixes the line numbering issue observed during yesterday's V10C flight. These will be tested tomorrow. Crew will continue to monitor flight line numbering in both Snapshot and RiAcquire in all flight plans to ensure they match.
- Extractions on HK3 going well, but QAQC has failed to generate Camera and NIS reports for all three extractions run.

Daily Coverage

Estimated Cloud Cover Key

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

D00|N10D

| Line # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
|--------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|---|
| Lidar | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Spectrometer | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Camera | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Cloud Cover | | | | | | | | | | | | | | | | | | | | | |

| Line # | 21 | 22 | 23 | 24 |
|--------------|----|----|----|----|
| Lidar | ✓ | ✓ | ✓ | ✓ |
| Spectrometer | ✓ | ✓ | ✓ | ✓ |
| Camera | ✓ | ✓ | ✓ | ✓ |
| Cloud Cover | | | | |

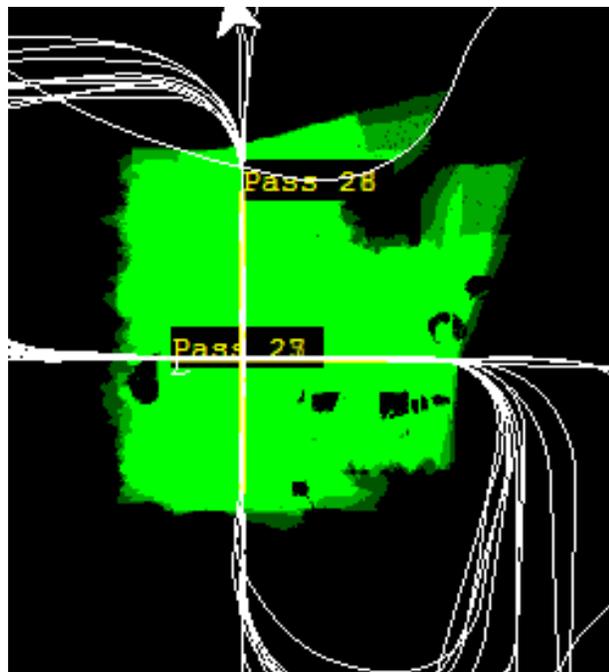
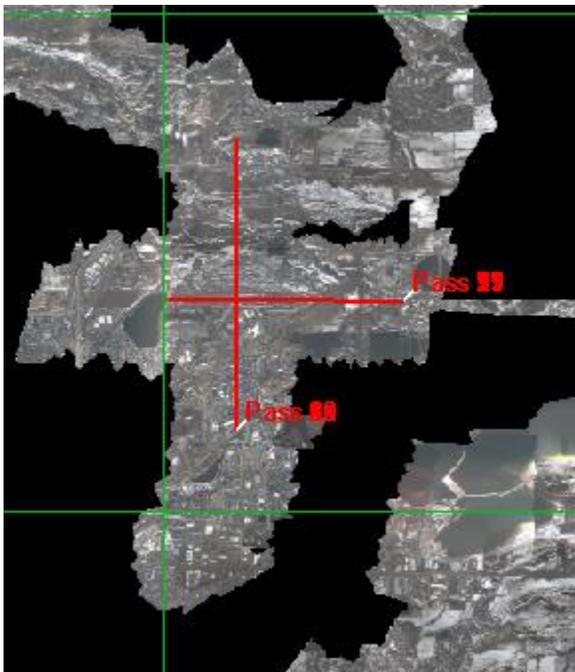
Total number of lines flown: 24

D00|H10C

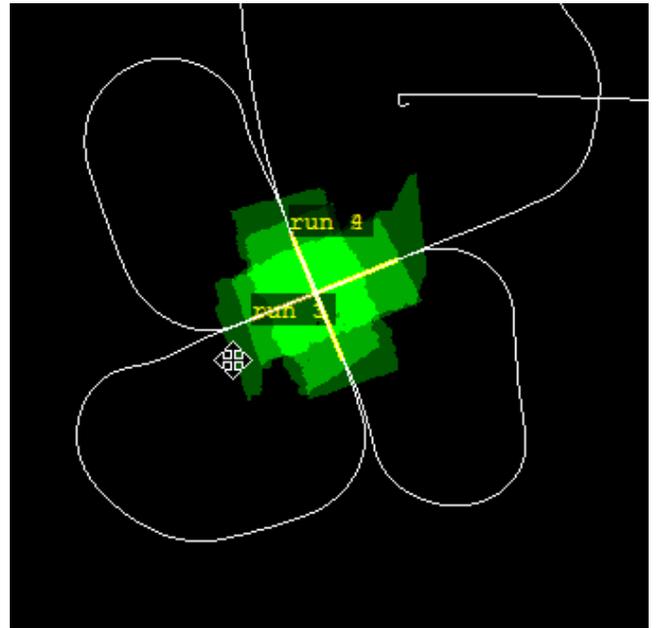
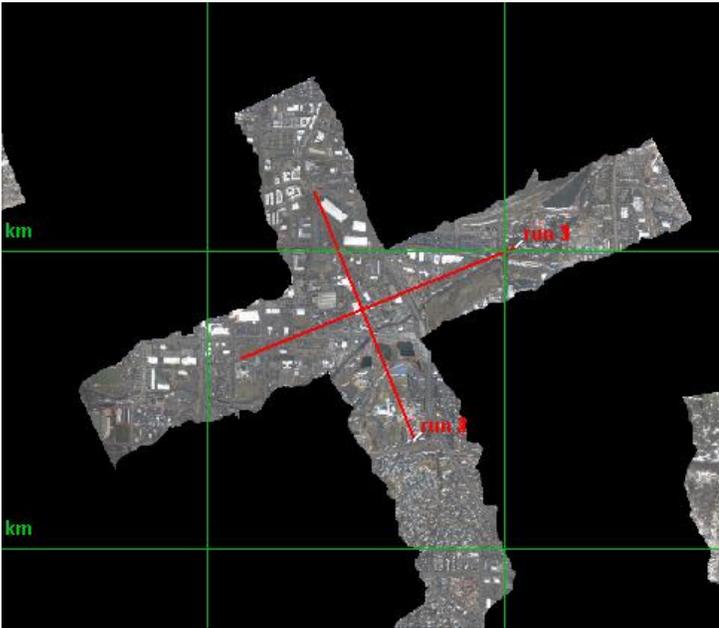
| Line # | 1 | 2 | 3 | 4 |
|--------------|---|---|---|---|
| Lidar | ✓ | ✓ | ✓ | ✓ |
| Spectrometer | ✓ | ✓ | ✓ | ✓ |
| Camera | ✓ | | | ✓ |
| Cloud Cover | | | | |

Total number of lines flown: 4

Flight Screenshots



NIS and Lidar Screen captures for Nominal Runway flight.



NIS and Lidar Screen captures for HQ Lidar Validation flight.

Pictures



The Twin Otter landing at Boulder Airport in the melting snow.



Parachuters landing at the Boulder airport during the last landing today.

Cumulative Domain Coverage

D00|B10E (Riegl Boresight Calibration - 1600m, 1000m, 500m)

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|

Flown: 0% (0/20)
 Green: 0% (0/20)
 Yellow: 0% (0/20)
 Red: 0% (0/20)

D00|H10C (NEON Headquarters Lidar Test - Riegl)

| | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

Flown: 100% (4/4)
 Green: 0% (0/4)
 Yellow: 0% (0/4)
 Red: 100% (4/4)

D00|N10D (Nominal Runway at KBDU - Riegl)

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|
| 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 | | | | | | | | | | | | |

Flown: 86% (24/28)
 Green: 46% (13/28)
 Yellow: 0% (0/28)
 Red: 39% (11/28)

D00|O10B (NIS Offset - Riegl)

| | |
|---|---|
| 1 | 2 |
|---|---|

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

D00|R10C (Table Mountain Radiometric Calibration - Riegl)

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

Flown: 0% (0/5)
 Green: 0% (0/5)
 Yellow: 0% (0/5)
 Red: 0% (0/5)

D00|V10C (Boulder City South)

| | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 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 | | | | | | | | | | | |

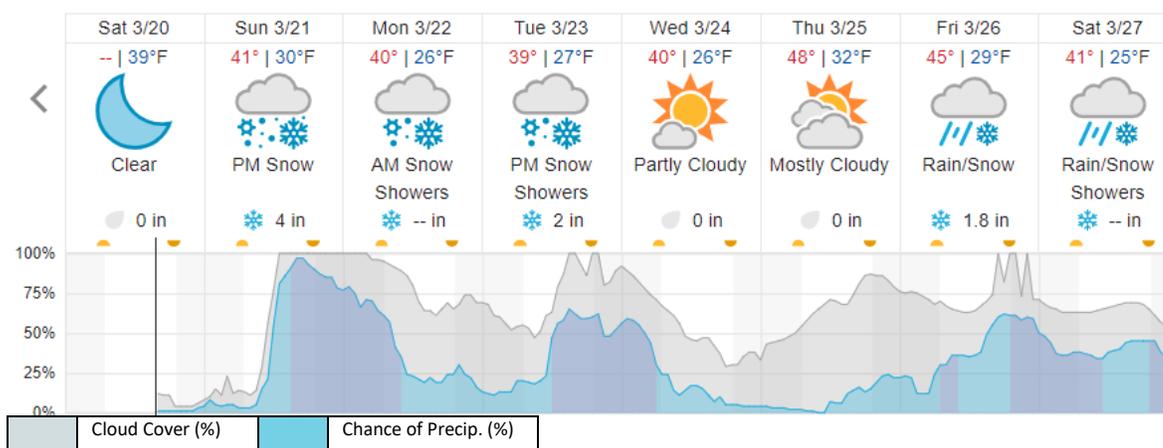
Flown: 10% (3/29)
 Green: 0% (0/29)
 Yellow: 0% (0/29)
 Red: 10% (3/29)

D00|W10C (Wiggle Timing Test - Riegl)

| | |
|---|---|
| 1 | 2 |
|---|---|

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

Weather Forecast



source: wunderground.com

Flight Collection Plan for March 21, 2021

Flyority 1

Collection Area: Table Mountain Radiometric Calibration
 Flight Plan Name: D10_R10C_Rad_Cal_TBMT_v1_Q780
 On-station Time: 1700 UTC / 1100 L
 Additional Considerations: Ground should be dry.

Flyority 2

Collection Area: Boresight Calibration – Greeley, CO
 Flight Plan Name: D10_B10E_Boresight_1600m_Q780
 On-station Time: 1600 UTC / 1000 L
 Additional Considerations: No recent snowfall, clear roofs required.

Flyority 3

Collection Area: NIS Offset Flight

Flight Plan Name: D10_O10B_NIS_Offset_v2_Q780

On-station Time: 1630 UTC / 1030 L

No flights anticipated 3/21/2021