



## March 21, 2018 Payload 3 Daily Flight Report



**Date:** 03-21-18

**Flight Campaign ID:** 2018\_P3C1

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

**Domain:** 10

**Sites Flown:** H10C (NEON HQ Lidar Validation), V10C (Boulder City South), CPER (Central Plains Ecological Range)

**Days left in Domain:** 12

**Report Author:** Ivana Vu

**Flight Crew:** John Adler, Mike Wussow, Cameron Chapman, Matt DeVoe, Mitch Haynes

**Ground/GPS Crew:** John Adler, Robb Walker

**Pilots:** Stephen Brawdars, Mike Francis

**Additional Personnel:** None

**GPS Instruments:** GPS01-FBO\_KBDU, GPS15-CPER

**Flight Hours:** 1:02, 1:03, 1:28

**Hours until aircraft maintenance:** 118.55

**Summary:** Two training flights and the HQ Lidar Validation was completed today. Cam is now fully certified to operate Payload 3.

### **New Faults:**

Flight Plans – Lidar swath overlap appears inadequate [see Flight Screenshots]

Lidar – Error message on RiAcquire “LASER\_HEARTBEAT\_TIMEOUT\_EXPIRED” and corresponding visible gaps in swath [see Pictures]

Flight Plans – All new Riegl flight plan kml’s do not load markers onto DCC software

### **Ongoing Faults:**

Flight Disks – Neither MIDAS disks from Disk Set 2 were recognized by MIDAS computer during system startup

Lidar – Remote Desktop to RiAcquire lost connection several times in-flight

Spectrometer – Shutter on NIS not closed at request of the lab manager due to a known malfunction

### **Resolved Faults:**

Lidar – SnapSHOT failed to acquire GPS signal. Diagnosis: Full lidar system power cycle resolve issue

Hotel Kit – DCC hard drive showing as failed on Hotel Kit. Diagnosis: Internal Molex cable was replaced and system is now fully functional (ServiceNow Ticket #: INC0012851)

**Other Issues & Concerns:** None

### **Comments:**

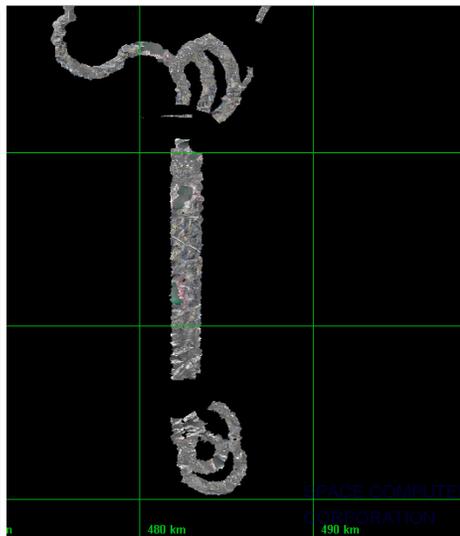
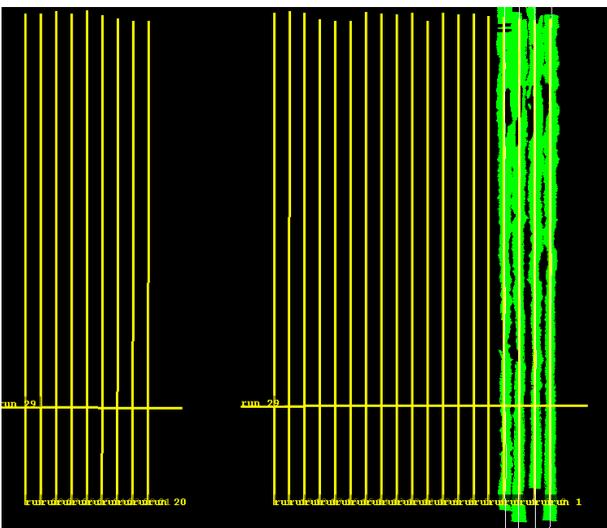
- Disk Sets 2 and 5 will be flight tested tomorrow to ensure functionality
- Mike and Mitch completed NIS re-certification
- Cam completed 2<sup>nd</sup> & 3<sup>rd</sup> lidar certification flights
- Robb completed ground duty certification
- Mitch completed 1<sup>st</sup> lidar observation flight

# Flight Screenshots:

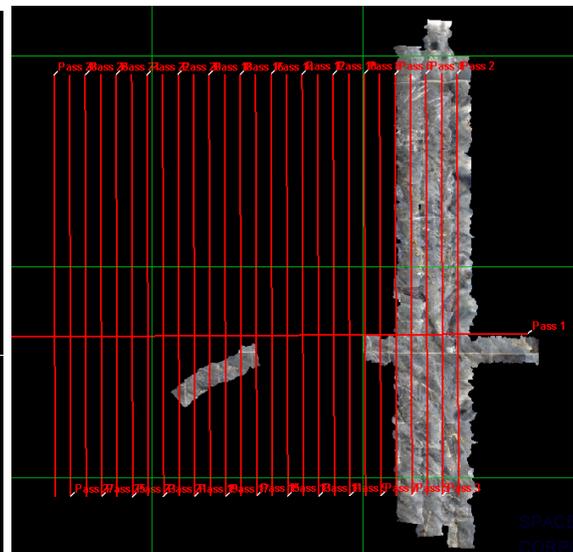
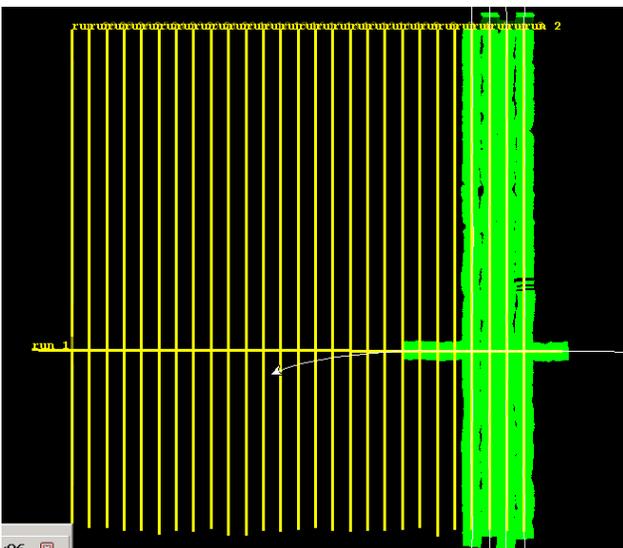
## Lidar Validation



H10C (note Flight Plan Fault)

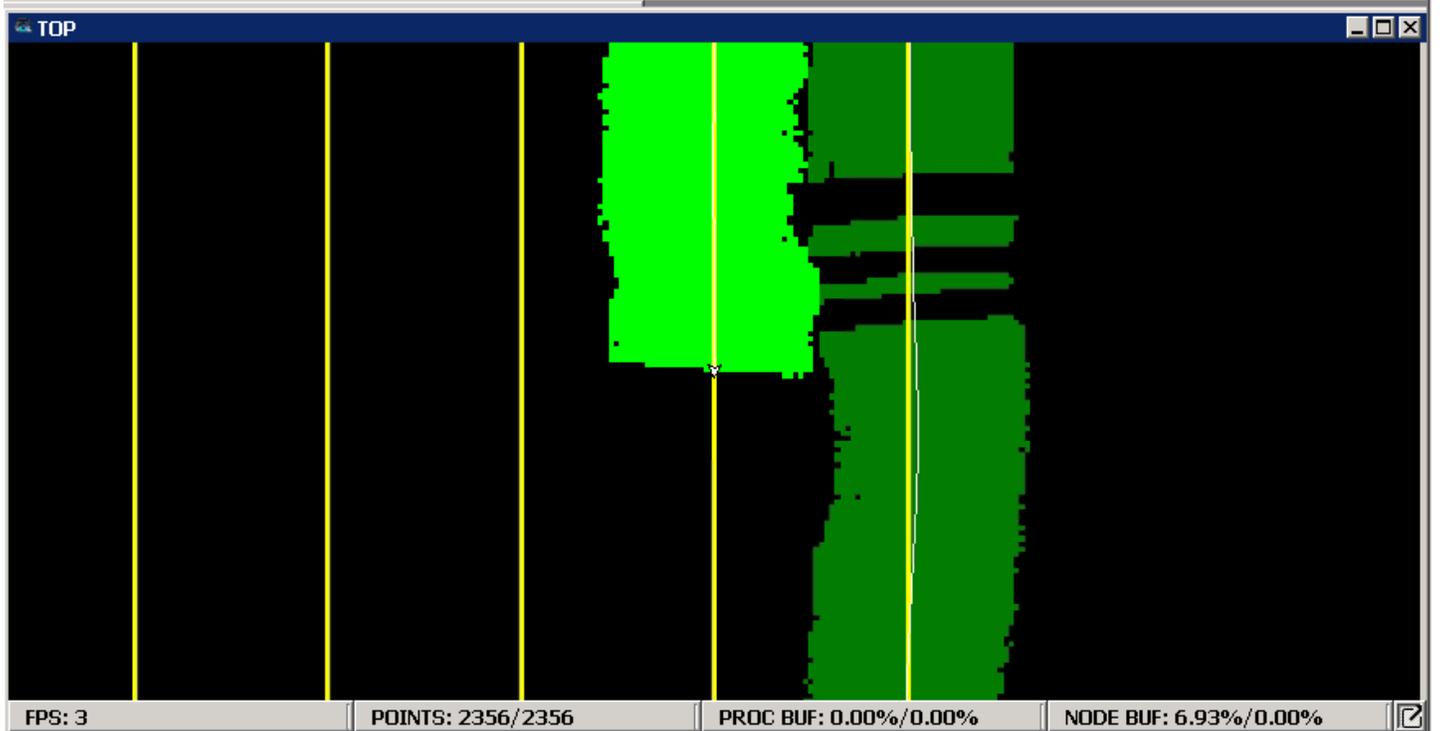
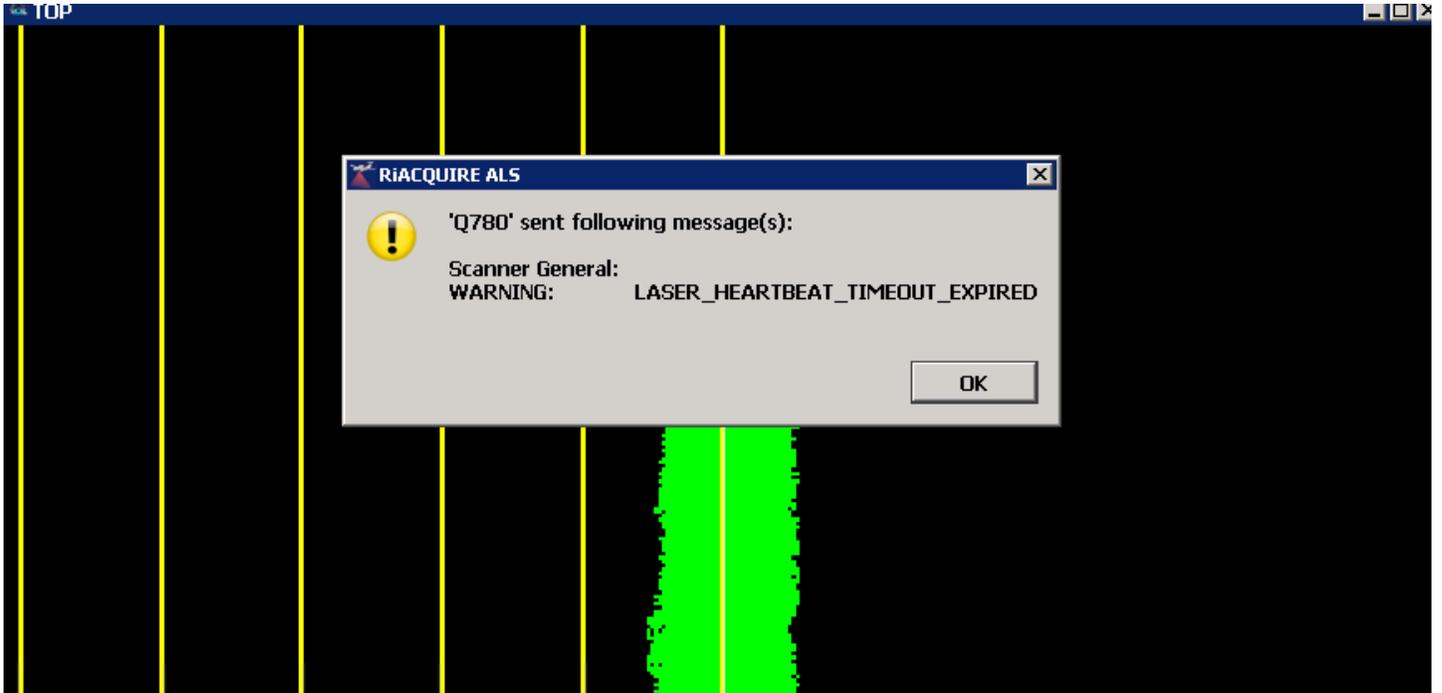


## CPER



**Pictures:**

**Lidar Fault**



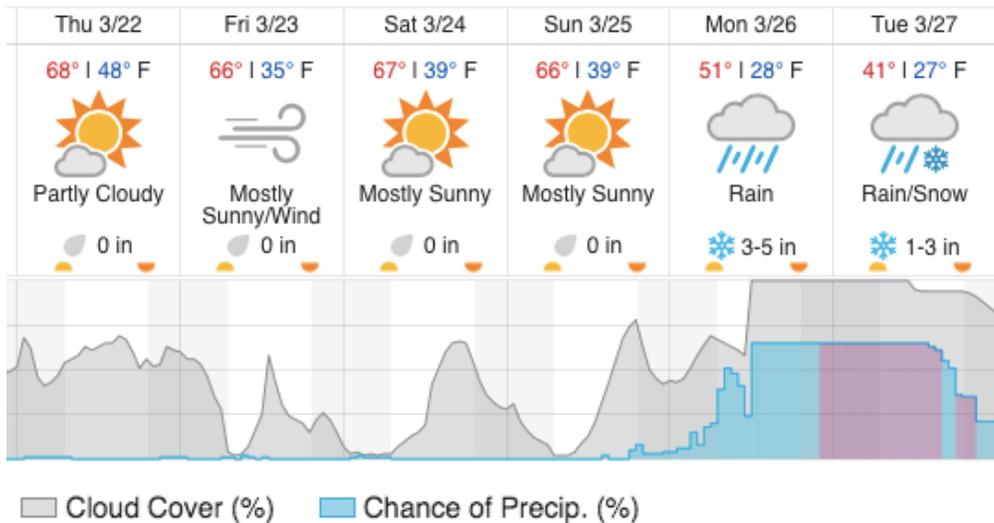
**Daily Domain Coverage:** N/A

**Cumulative Domain Coverage:**

Calibration Flights Completed: Nominal Runway Survey, NEON HQ Lidar Validation

Not Complete: Greeley Boresight, Wiggle Timing Test, Table Mountain Radiometric, NIS Offset Flight

## Weather Forecast:



## Flight Collection Plan for 22 March 2018

Flyority 1

Collection Area: Greeley Boresight Calibration

Flight Plan Name: D10\_B10D\_Boresight\_Apx\_Q780.rpp

On Station Time: 1550 Local / 0950 UTC (30°)

Flyority 2

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10\_R10C\_Rad\_Cal\_TMBT\_v1\_Q780.rpp

On Station Time: 1740 Local / 1140 UTC (45°)

Flyority 3

Collection Area: Wiggle Timing Test at Boulder Airport

Flight Plan Name: D10\_W10C\_Wiggle\_Test\_v5\_Q780.rpp

On Station Time: 1550 Local / 0950 UTC (30°)

Flyority 4

Collection Area: NIS Offset Flight

Flight Plan Name: D10\_O10B\_NIS\_Offset\_v2\_Q780.rpp

On Station Time: 1700 Local / 1100 UTC (40°)

Crew: All hands on deck