



## March 27, 2018 Payload 3 Daily Flight Report



**Date:** 03-27-18

**Flight Campaign ID:** 2018\_P3C1

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

**Domain:** 10

**Sites Flown:** V10C

**Days left in Domain:** 2

**Report Author:** Michael Wussow

**Flight Crew:** Michael Wussow, Robb Walker, Mitch Haynes

**Ground/GPS Crew:** Ivana Vu, John Adler

**Pilots:** Stephen Brawders, Mike Francis

**Additional Personnel:** None

**GPS Instruments:** 01 – FBO\_KBDU

**Flight Hours:** 1:03

**Hours until aircraft maintenance:** 110.77

**Summary:** A spring snow storm left Boulder foggy and snow covered this morning. Clouds lifted in the afternoon enough to allow for one training flight over the Boulder City survey area. During the flight, the laser safety eye shutoff was tested successfully, but the lost connection to the RDP on the Riegl system was not resolved by one specific attempt to reduce suspected network overload. The NIS system was outside of chamber pressure tolerances this morning and was pumped down before the flight.



Looking over Boulder towards Rocky Mountain National Park after the spring snow. (PC: Mike Wussow)



**New Faults:** None



**Ongoing Faults:**

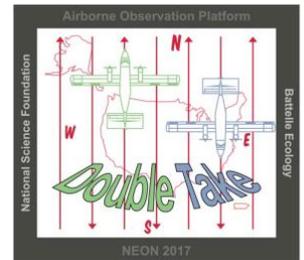
- RiAcquire – 20180324 Received several ‘INS-GPS 1’ errors on RiAcquire that don’t look familiar (see screenshot below). Will investigate to see what these errors mean and why they’re being received.
- Hotel Kit 3 – SBET plots are failing to generate in QAQC. Extractions otherwise occurring properly.
- Grafana Dashboard – No Environmental Pressure and Humidity Readings being received, even after reset
- Database – Flight lines from Lidar logs not being placed in PDF logs, only CSV.
- Flight Plans – All 2018 Riegl flight plan kml’s do not load markers onto DCC software. Newly created flight plan kmls did not resolve the issue.
- Lidar – 20180327 “LASER\_HEARTBEAT\_TIMEOUT\_EXPIRED” and corresponding visible gaps in swath Error occurred when RDP lost connection twice. 20180324 Error occurred on one line. 20180323 Same error occurred. 20180322 Error occurred again, believed to be related to lost connection with scanner. 20180321 Error message on RiAcquire. “LASER\_HEARTBEAT\_TIMEOUT\_EXPIRED” and corresponding visible gaps in swath
- Flight Disks – 20170327 Set 2 disks were tried again today after receiving replacements, could not read MIDAS 1 Disk. 20180321 MIDAS disks from Disk Set 2 were not recognized by MIDAS computer during system startup. Disk set has been removed from rotation till issue is resolved.
- Lidar – 20180327 Tried tactic of unchecking production of MONSDW files to reduce network load, but RDP connection was lost twice during this flight. 2018032414 Several lost connections occurred for the Remote Desktop to both RiAcquire and Tracker snapSHOT, which effected the pilot display. Issue will continue to be monitored. 20180322 New Ethernet cable attached but same issues occurred.
- 20180321 Remote Desktop to RiAcquire lost connection several times in-flight. Issue is believed to be isolated to the Ethernet connection.
- Spectrometer – Shutter on NIS not closed at request of the lab manager due to a known malfunction

**Resolved Faults:** None

**Other Issues & Concerns:** The NIS chamber pressure had risen above the tolerance level, so the system was pumped down for about six hours. This is concerning because the pressure has been slowly rising at a relatively fast rate compared to the other payloads (Payload was installed and getter activated 13 days ago). This system has a different getter which may be the cause of this issue. The getter is being activated this evening and the pressure will continue to be monitored closely.

**Comments:** Ivana completed her ground recertification, Robb completed his second NIS certification flight, and Mike completed his second Riegl certification flight. Mitch and John were certifiers.

Mike will be first boots on the ground for P3C1 Domain collections as he heads to Fresno, CA tomorrow morning.



Daily Domain Coverage: N/A

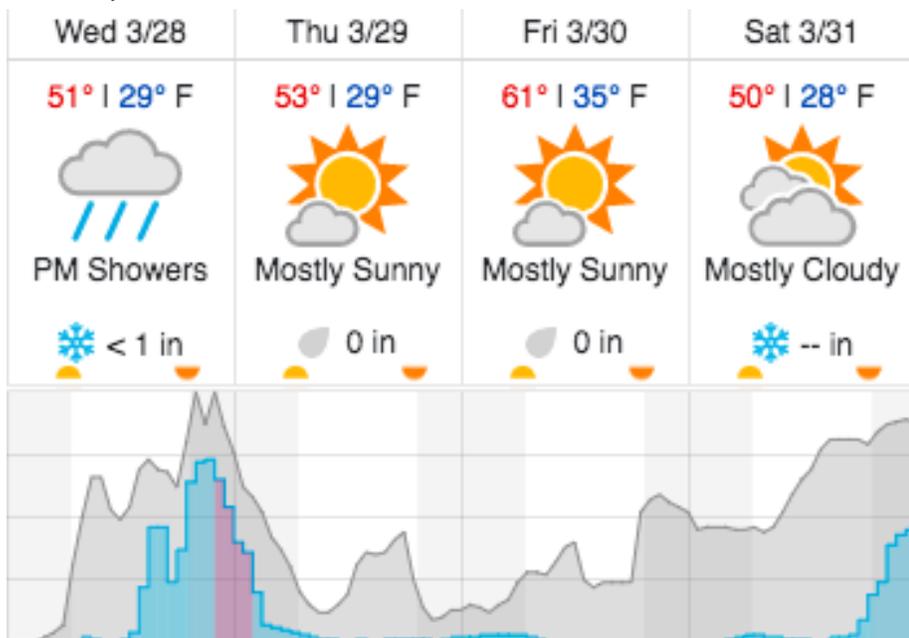
**Cumulative Domain Coverage:**

Calibration Flights Completed: Nominal Runway Survey, NEON HQ Lidar Validation, Greeley Boresight, Wiggle Timing Test

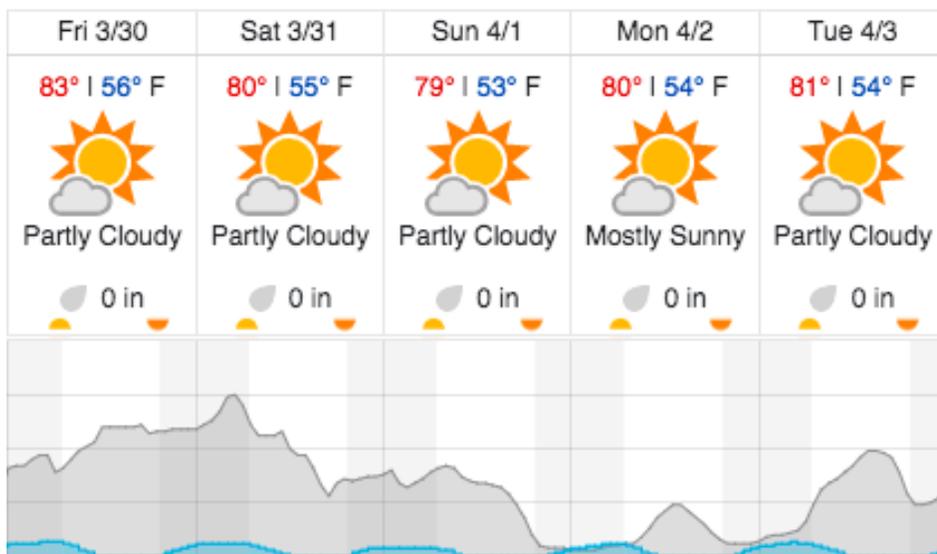
Not Complete: Table Mountain Radiometric, NIS Offset Flight

**Weather Forecast:**

**Boulder, CO**



**Fresno, CA**



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



## **Flight Collection Plan for 28 March 2018**

### Flyority 1

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 2

Collection Area: NIS Offset Flight

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

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

### Flyority 3

Collection Area: Greeley Boresight Calibration (re-fly if Green)

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

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

Crew: Matt (Lidar), Ivana (Lidar Obs), Robb (NIS), Cam (Ground)

