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 Brawders, 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 2nd & 3rd lidar certification flights
- Robb completed ground duty certification
- Mitch completed 1st lidar observation flight
Flight Screenshots:

Lidar Validation

H10C (note Flight Plan Fault)

CPER
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:

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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