March 29, 2018 Payload 3 Daily Flight Report

Date: 03-29-18
Flight Campaign ID: 2018_P3C1
Airport, FBO ID, City: Boulder Municipal Airport (KBDU) – Boulder, CO

Domain: 10
Sites Flown: V10C (Training – Boulder City Nominal)
Days left in Domain: 0

Report Author: Matt DeVoe
Flight Crew: Matt Devoe, Heather Rogers, Ivana Vu
Ground/GPS Crew: John Adler
Pilots: Stephen Brawders, Mike Francis
Additional Personnel: None

GPS Instruments: GPS01 – FBO_KBDU
Flight Hours: 1:07
Hours until aircraft maintenance: 109.65

Summary
Riegl Observation flight for Heather Rogers and Ivana Vu. D10_V10C_East_West_v7_Q780 was the flight plan flown. Lines 1-4 with an air test was accomplished. This flight was for training purposes only and data will not be extracted.

New Issues:
Pressure loss on the NIS, possibly due to a bad seal. Ian Crocker cut the strap holding the getter in hopes of reducing vibration from the PIM. Flight crew will monitor during transit. PL3 vacuum pump will be shipped to D17 if needed.

Ongoing Issues:
- 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 – 20180324 SBET plots are failing to generate in QAQC. Extractions otherwise occurring properly.
- Grafana Dashboard – 20180324 No Environmental Pressure and Humidity Readings being received, even after reset
- Database – 20180324 Flight lines from Lidar logs not being placed in PDF logs, only CSV.
- 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 – 20180319 Shutter on NIS not closed at request of the lab manager due to a known malfunction

Resolved Issues:
None

Other Concerns
Pressure loss on the NIS, possibly due to a bad seal. Ian Crocker cut the strap holding the getter in hopes of reducing vibration from the PIM. Flight crew will monitor during transit. PL3 vacuum pump wil be shipped to D17 if needed.

Comments
None

Flight Screenshots
None

Pictures
None

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

<table>
<thead>
<tr>
<th></th>
<th>Fri 3/30</th>
<th>Sat 3/31</th>
<th>Sun 4/1</th>
<th>Mon 4/2</th>
<th>Tue 4/3</th>
<th>Wed 4/4</th>
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<tbody>
<tr>
<td>Boulder, CO</td>
<td>62°</td>
<td>1 36°</td>
<td>F</td>
<td>Partly Cloudy</td>
<td>Partly Cloudy</td>
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<td>Fresno, CA</td>
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<td>1 55°</td>
<td>F</td>
<td>Mostly Sunny</td>
<td>Mostly Sunny</td>
<td>Mostly Sunny</td>
</tr>
</tbody>
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Flight Collection Plan for 30 March 2018
Transit from KBDU to D17 (Fresno, CA)
Crew: Mitch Haynes

Flight Collection Plan for 31 March 2018
Flyority 1
Collection Area: San Joaquin Experimental Range
Flight Plan Name: D17_SJER_C1_P1_v3_Q780
On Station Time: 1020 Local / 1720 UTC (40°)
Crew: Cameron Chapman, Mitch Haynes, Robb Walker, Mike Wussow