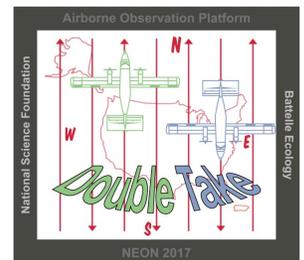




April 4, 2018 Payload 3 Daily Flight Report



Date: 2018-04-04

Flight Campaign ID: 2018_P3C1

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

Domain: 10

Sites Flown: Transit (KFAT to KRIF to KPUB to KBDU)

Days left in Domain: 11

Report Author: Mitch Haynes

Flight Crew: Mitch Haynes, Robb Walker

Ground/GPS: Cameron Chapman, Michael Wussow

Pilots: Mike Francis, Ross Rice

Additional Personnel: Nick Marusich

GPS Instruments: None

Flight Hours: 2:23+2:46+1.02

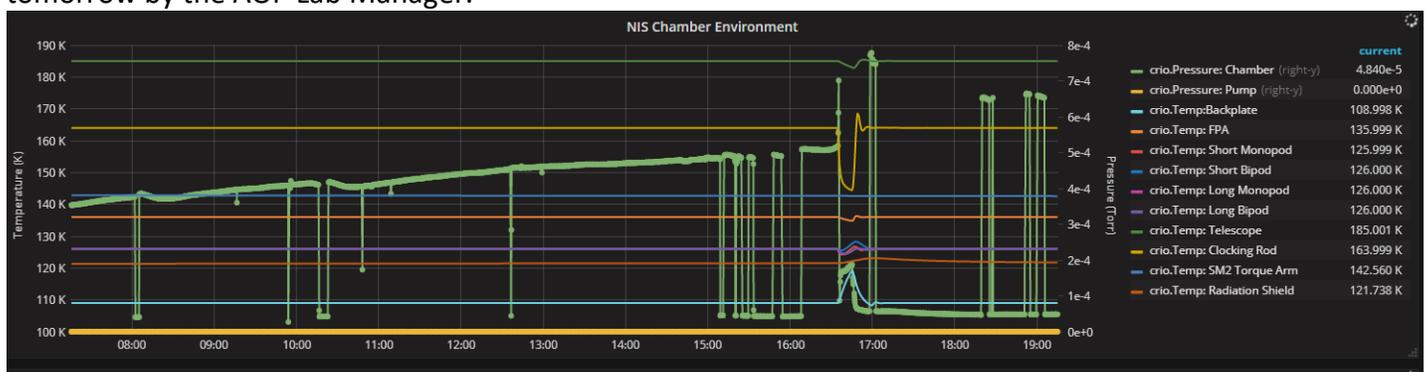
Hours until maintenance: 88.77

Summary

Severe turbulence being reported over the Rockies lead to a longer than expected return transit from D17, taking fuel stops in Richfield, UT and Pueblo, CO before steering north back to Boulder.

Concerns

Shortly before takeoff from KFAT, pressure readings from the spectrometer were observed “jumping” around between $7e-4$ and $5e-5$. This jumping was monitored and continued throughout the rest of the transits back. This may indicate a sensor gauge or connection issue rather than a real vacuum pressure change. Upon return to the hangar, the vacuum pump was hooked up and started, and this issue will be investigated further tomorrow by the AOP Lab Manager.



Comments

- RAID 2018_P3C1_03 was shipped to the Data Center
- GPS 02 was shipped back to the Hangar
- Michael Wussow and Cameron Chapman will return from D17 tomorrow morning
- The Database updates made this week have been huge improvements. Thank you, Christian!

New Issues

None

On-Going Issues

Fault: Lidar	Ticket:	Open Date: 3/21/2018
20180321 Error message on RiAcquire. LASER_HEARTBEAT_TIMEOUT_EXPIRED and corresponding visible gaps in swath. 20180322 Error occurred again, believed to be related to lost connection with scanner. 20180323 Same error occurred. 20180324 Error occurred on one line. 20180327 LASER_HEARTBEAT_TIMEOUT_EXPIRED and corresponding visible gaps in swath error occurred when RDP lost connection twice. 20180331 VNC connections for RiAcquire and SnapSHOT were used today and error did NOT occur. 20180401 No laser heartbeat errors occurred in 4 hour flight while using VNCs		
Fault: Lidar	Ticket:	Open Date: 3/21/2018
20180322 New Ethernet cable attached but same issues occurred. 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. 20180327 Tried tactic of unchecking production of MONSDW files to reduce network load, but RDP connection was lost twice during this flight. 20180330 Per Lab Manager's suggestion, VNC's for RiAcquire and Tracker were tested during the transit, and no lag was observed. 20180331 VNC connections for RiAcquire and Snapshot used instead of RDP. 20180401 Used VNCs (with slight lag) and external displays, no lost connections occurred in 4 hour flight		
Fault: QAQC	Ticket:	Open Date: 3/24/2018
SBET plots are failing to generate in QAQC. Extractions otherwise occurring properly.		
Fault: Lidar	Ticket:	Open Date: 3/24/2018
Received several INS-GPS 1 errors on RiAcquire during todays flight that dont look familiar. Will investigate to see what these errors mean and why theyre being received. 20180401 No INS-GPS1 Errors occurred in 4 hour flight		
Fault: Spectrometer	Ticket:	Open Date: 3/29/2018
20180329 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. 20180330 No significant pressure loss occurred during the transit to D17. 20180331 NIS chamber pressure is continuing to rise, based on the trend crew is requesting pump to be shipped to D17 to be used if necessary. 20180404 Noticed chamber pressure was jumping around a lot before and during return transit from D17. Now suspect a sensor or connetion issue rather than a real vacuum pressure change.		
Fault: Flight Plans	Ticket:	Open Date: 4/1/2018
20180331 KMLs for this flight had pass numbers that were ordered in reverse for SnapShot compared to RiAcquire and MarsRover and the flight plan summaries . Also the passes that SnapSHOT indicated showed up as in between passes shown on RiAcquire and MarsRover. 2018040117 Used 2017 kml for flight lines, still didn't match (expected),		
Fault: Database	Ticket:	Open Date: 4/2/2018
20180402 Database crash during flight. Sometimes to both operators simultaneously, but also to both NIS and Lidar operator individually. This has been a reoccurring issue, but is only being added now. 20180404 Database no longer crashes when minimizing and maximizing.		

Resolved Issues (Today)

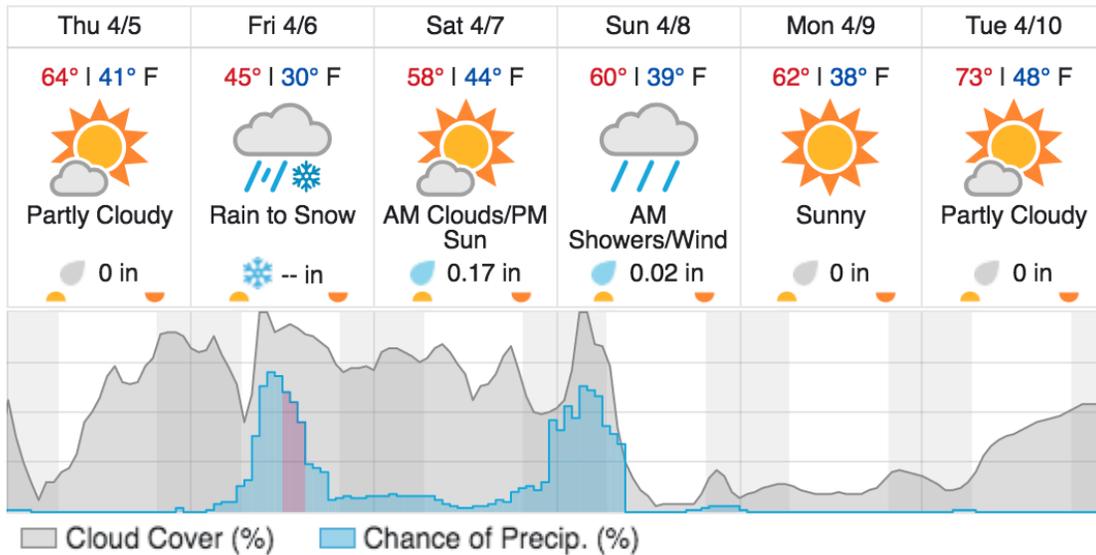
Fault: Database	Ticket:	Open Date: 3/24/2018	Close Date: 4/4/2018
Flight lines from Lidar logs not being placed in PDF logs, only CSV. 20180404 Recent database update now able to generate full PDF logs. Previously generated logs will be re-generated retroactively. FltOps will coordinate to ensure correct logs make it onto the ECS with L0 data.			

Pictures

Moved to bottom of report due to high volume

Weather Forecast

Boulder, CO



Flight Collection Plan for 5 April 2018

Lab Troubleshooting day for Spectrometer – No Flights Planned

Flight Collection Plan for 6-8 April 2018

Continuing P3 Calibration and Training Flight - Weather Depending
Flyority 1

Collection Area: Table Mountain Radiometric Calibration

Flight Plan Name: D10_R10C_Rad_Cal_TMBT_v1_Q780.rpp

Flyority 2

Collection Area: NIS Offset Flight

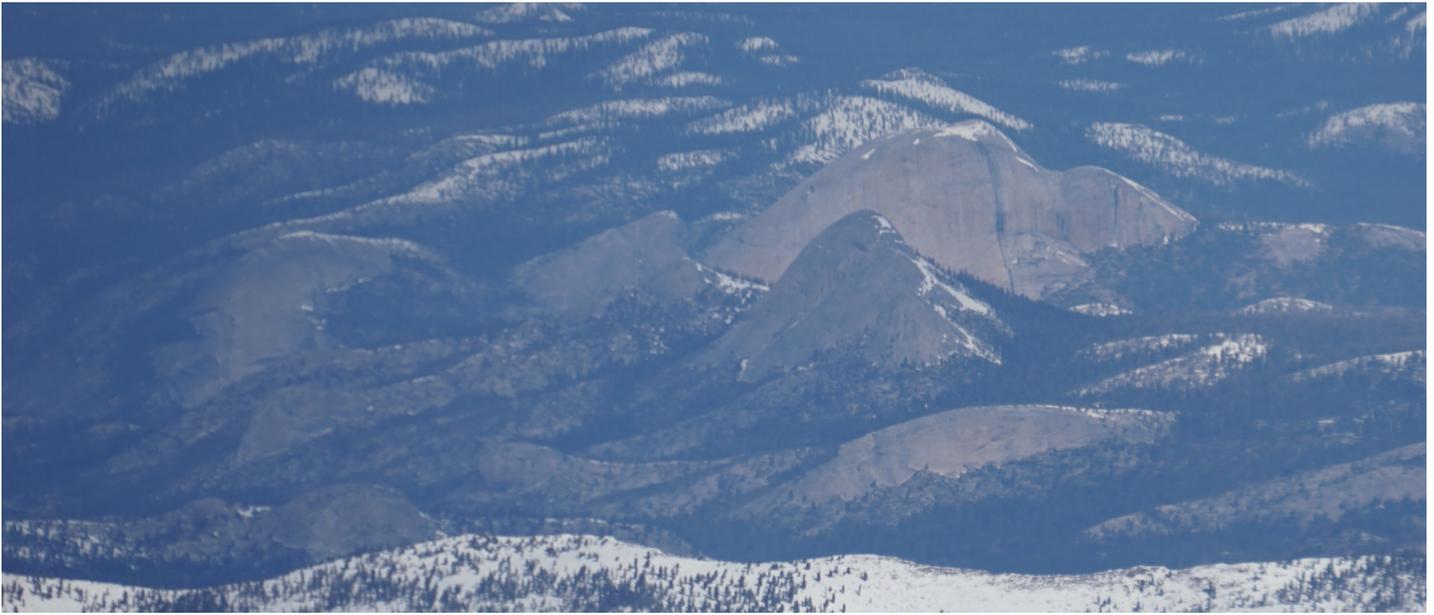
Flight Plan Name: D10_O10B_NIS_Offset_v2_Q780.rpp

Crew: TBD

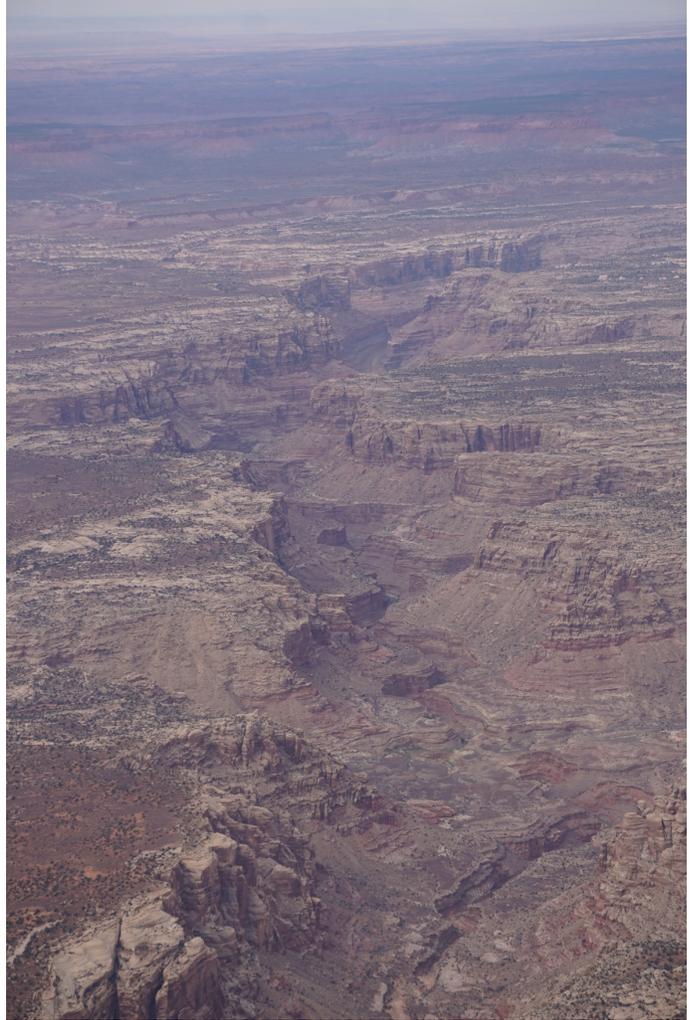
Photos from the Transit

In order:

1. Backside of Half Dome, Yosemite National Park (viewed from a distance)
2. Fuel stopover in Richfield, Utah
3. Powell Point, Utah
4. Canyonlands National Park, Needles District
5. Great Sand Dunes National Park, Sangre de Cristo Range
6. Escalante River, Grand Staircase Escalante National Monument
7. Dark Canyon Wilderness, looking down into Canyonlands Maze District







Special thanks to Pilot Ross Rice for being our Utah Wilderness guide, identifying all the landmarks as we flew over.