



## June 28, 2018 Payload 3 Daily Flight Report



**Date:** 2018-06-28

**Flight Campaign ID:** 2018\_P3C1

**Airport, FBO ID, City:** Bozeman Yellowstone International Airport (KBZN) - Belgrade, MT

**Domain:** 12

**Sites Flown:**

**Days left in Domain:** 8

**Report Author:** Heather Rogers

**Flight Crew:**

**Flight Hours:** 00:00

**Ground/GPS:** Cameron Chapman, Mitch Haynes, Heather Rogers

**Hours until maintenance:** 82.35

**Pilots:** Mike Francis, Dylan Malfatti

**Additional Personnel:**

**GPS Instruments:**

### Summary

Weather and ongoing troubleshooting of the spectrometer prevented data collection flights today.

Yesterday the NIS was allowed to warm up while still on the vacuum pump. When the FPA reached 217K, the standard non-ECS startup procedure was completed in order to test the NIS. As expected, the signal was “noisy”, but now operational. Under the advisement of Ian Crocker, the flight team began cooling and periodic monitoring to confirm continued functionality. If things continue along the same trajectory, it is anticipated that the NIS will reach the desired specifications sometime tomorrow.

### Concerns

The NIS chamber pressure sensor appears to be displaying an incorrect and rapidly-fluctuating (by an order of magnitude) readout relative to the pump pressure sensor and, thus, the telemetry chamber pressure is fluctuating erratically. It is believed that the chamber pressure is within specifications and the chamber pressure sensor is faulty.

### Comments

GPS data for external sites U-MAWY and U-P720 were uploaded to ECS.

### Cumulative Domain Coverage

#### YELL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
81	82	83	84	85															

Flown: 0% (0/85)

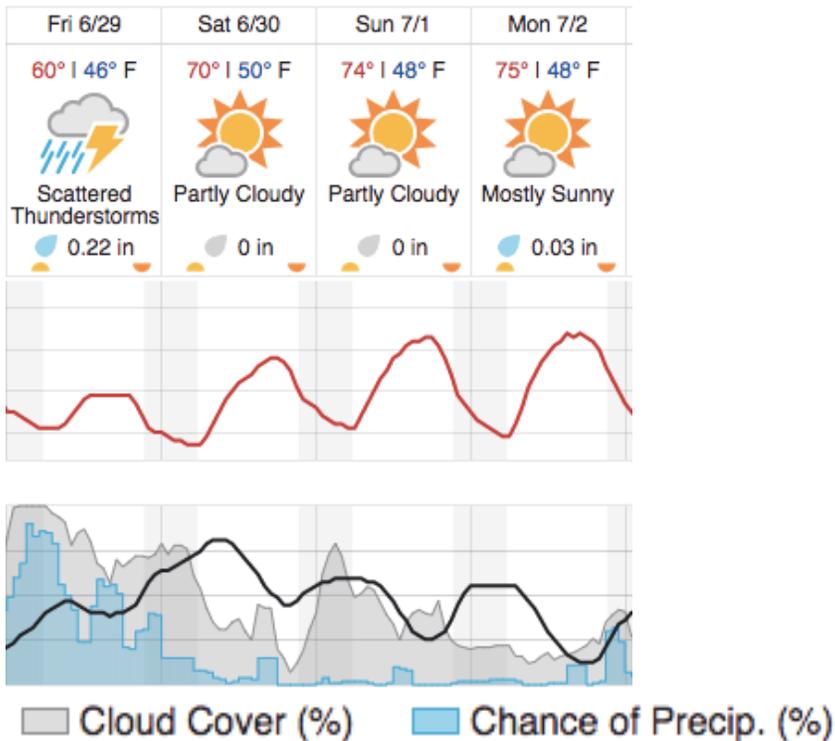
Green: 0% (0/85)

Yellow: 0% (0/85)

Red: 0% (0/85)

### Weather Forecast

Bozeman, MT



### Flight Collection Plan for 29 June 2018

Flyority 1 (Flight Priority 1):

Collection Area: Yellowstone Northern Range (YELL)

Flight Plan Name: D12\_YELL\_C1\_P1\_v2\_Q780

On-Station Time: 15:50 UTC / 0950 L:

Crew: Heather Rogers (Lidar), Cameron Chapman (Lidar Trainer), Mitch Haynes (NIS)

### On-Going Issues

Fault: Spectrometer	Open Date: 5/22/2018
<p>NIS-3 FPA Display is showing up as 4 solid gray boxes. Trouble-shooting was performed by cycling power to both NIS and entire system with no results. Additional trouble-shooting was performed on 5/22/18 with support from Ian and direction from JPL to identify problem. It was indicated that the FPIE may not be starting up properly and the following items were tested: 1) All LEDs are green and illuminate when FPIE PSU is powered on., 2) There are 2 clicks (one when initially powered on and one 2 seconds after power applied) heard from FPIE box when FPIE PSU powered down for at least 10 sec., 3) FPIE PSU fan was heard inside power box.</p> <p>20180627 After a 2 day transit where the system was shut off, the NIS -3 FPA display is once again displaying as 4 grey-shaded boxes. The system for the NIS was shut down and re-booted without resulting in nominal functionality. Following this, the entire system was shut down and restarted.</p> <p>20180628 The NIS was allowed to warm up. Non-ECS systems were restarted. The NIS appears to be functioning nominally again. The chamber pressure sensor is still not responding as expected to pumping, but it is assumed that the pressure reading is faulty and that the pump is functioning properly.</p>	