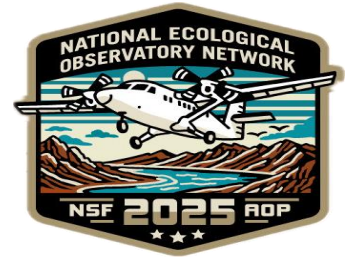




Payload 2 Daily Flight Report



Date: 2025-06-13

Flight Campaign ID: P2C1

Airport, FBO ID, City: Bismarck Municipal Airport (KBIS) - Bismarck, ND; -

Aircraft: N615AR

Domain: 09 (Northern Plains)

Sites Flown: None

Days left in Domain: 13

Report Author: Elissa

Lidar Operators: **Flight Hours:** 00:00

Spectrometer Operators: **Hours until maintenance:** 79.10

Pilots: Vince, Jacob

Ground Crew: Elissa, Alyssa

Summary

The replacement vacuum pump arrived at the FBO this morning, but faired even worse than the original upon trial, only reaching pressures in the range of E-2 Torr (as opposed to E-4). The replacement pump also appeared to have a faulty Varian gauge, evidenced by a pressure spike in the NIS chamber that coincided with a pressure drop in the vacuum pump, despite the Varian reading two orders of magnitude lower pressure than the chamber pressure gauge at the time. After testing both pumps in several different configurations, it was determined that the MKS pressure gauges on both sets were leaking air into their respective X-apparatuses. Once the MKS gauge was removed from the X-apparatus, the original pump with the known-functioning Varian gauge was able to reach adequately low vacuum. The chamber is now finally being pumped back down to vacuum.

Concerns

- Possible struggling vacuum pump.
- Possible Varian pressure gauge mis-reading.
- Multiple leaky MKS gauges.

Comments

- RAID 4 was rebuilt and re-shipped to Boulder today.
- The EPO was tested and is functioning properly.
- A tour was also conducted with D09 staff this morning!

Photos



D09 staff on a payload tour this morning.

Cumulative Domain Coverage

Estimated Cloud Cover Key

Green:	Yellow:	Red:
0-10%	11-50%	>50%

Solar Angle Less Than 40 degrees: (*)

D09 | NOGP (Northern Great Plains)

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														

Flown: 0% (0/26)

Green: 0% (0/26)

Yellow: 0% (0/26)

Red: 0% (0/26)

* Flown within 35deg solar angle

D09 | WOOD_DCFS (Woodworth and Dakota Coteau Field School)

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						

Flown: 0% (0/54)

Green: 0% (0/54)

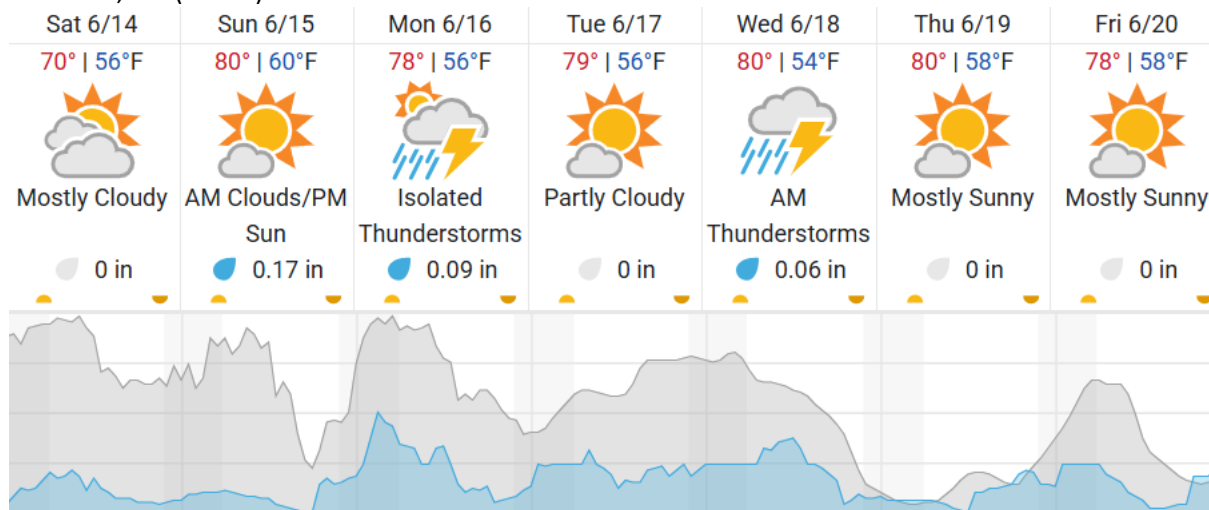
Yellow: 0% (0/54)

Red: 0% (0/54)

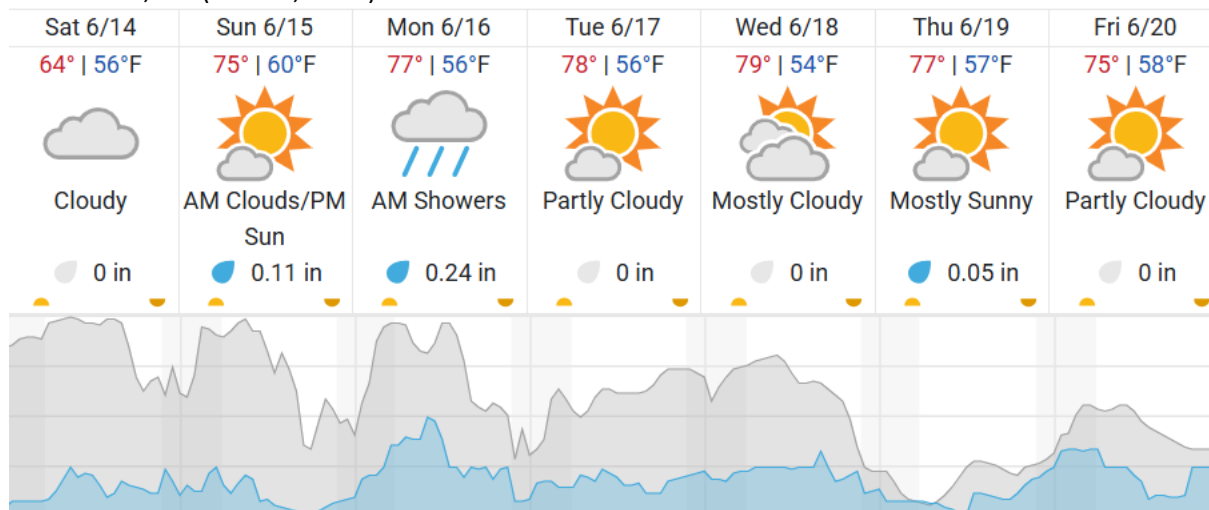
* Flown within 35deg solar angle

Weather Forecast

Bismarck, ND (NOGP)



Jamestown, ND (WOOD, DCFS)



source: wunderground.com

Flight Collection Plan for 14 June 2025

- Continue pumping down NIS chamber
- Re-activate getter
- Begin cooling when ready

Flight Collection Plan for 15 June 2025

Flyority 1

Northern Great Plains (NOGP)

Flight Plan Name: D09_NOGP_R2_P1_v3_VQ780

On-Station Time: (35 degrees): 1440 UTC / 0940 L

Flyority 2

Collection Area: Woodworth (WOOD) – Dakota Coteau Field School (DCFS)

Flight Plan Name: D09_WOOD_DCFS_C1_P1_v5_VQ780

On-Station Time: (35 degrees): 1430 UTC / 0930 L

Flyority 3

Lidar training flight.

Crew: Elissa (Lidar), Alyssa (NIS)