



Payload 3 Daily Flight Report



Date: 2022-05-20

Flight Campaign ID: P3C1

Airport, FBO ID, City: Asheville Regional Airport (KAVL) - Fletcher, NC

Aircraft: N70AR

Domain: 07 (Appalachians & Cumberland Plateau)

Sites Flown: GRSM_P1 (Great Smoky Mountains National Park Priority 1)

Days left in Domain: 15

Report Author: Michael

Lidar Operators: Michael

Flight Hours: 03:01

Spectrometer Operators: John

Hours until maintenance: 73.82

Pilots: Nick, Jeremy

GPS Instruments: 09 - FBO_KAVL, AOP_GRSM

Summary

The morning started with cloudy skies but moving cirrus and hot temperatures cleared away enough clouds to collect 10 green lines over the airshed at GRSM in the afternoon. That is, until they came back. The crew hoped to finish up ORNL today, but the site maintained a constant layer of small, fast moving puffy clouds all day.

Concerns

None

Comments

-Winds were so strong from the south that all lines were flown from North to South.

-The variable altitude flight plan was flown and despite the winds and turbulence, the pilots performed very well.

-A small drone whizzed past the plane at high altitude during the transit to the site. It was close enough to be concerning especially as it was well above legal flying height for drones.

-After landing and during system shutdown the GPU ran out of fuel. It was replaced quickly, however the replacement GPU could not provide enough power to charge the UPS 1250 while running the Chiller even though the voltage readings were stable at 27.2V. Fortunately the plane was placed in the hangar shortly after. Precious provided the necessary power and the UPS 1250 resumed charging with Chiller running.

Daily Coverage

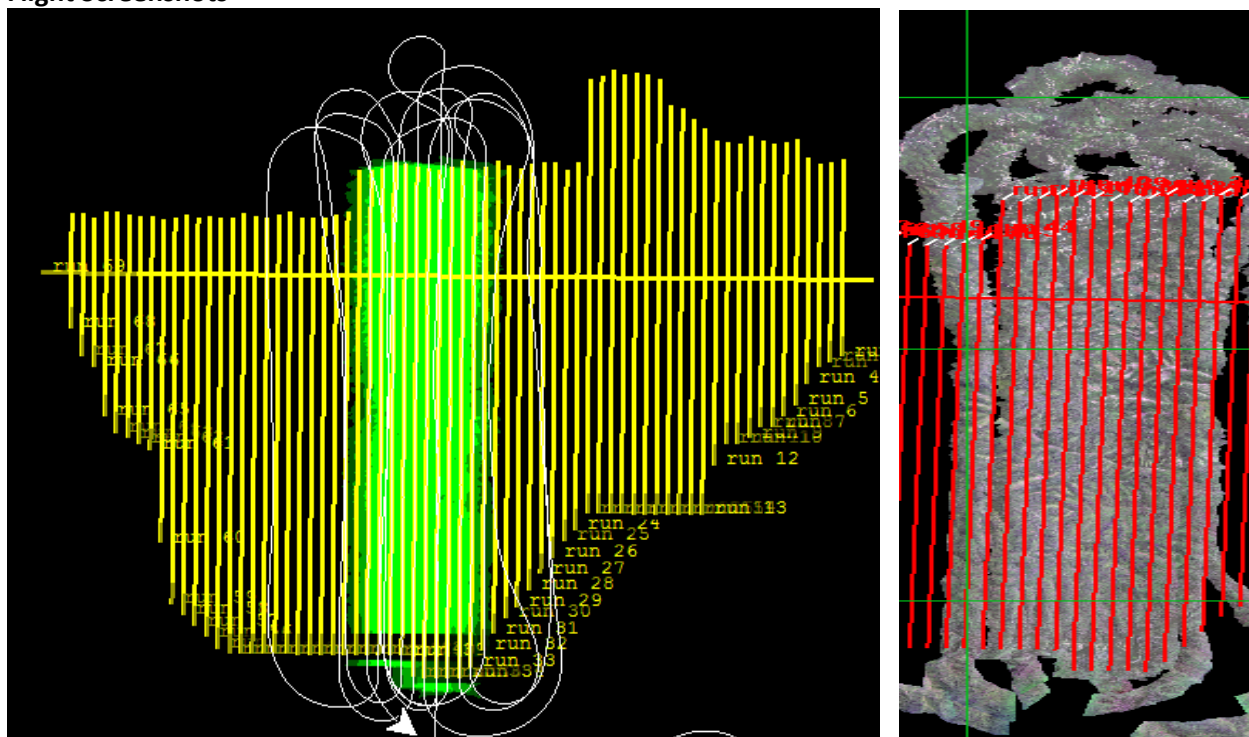
Estimated Cloud Cover Key

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

Line #	33	34	35	36	37	38	39	40	41	42
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover										

Total number of lines flown: 10

Flight Screenshots



The pilots did such a great job, no visible gaps were seen on the KVM's. What appear to be gaps in the NIS screenshot are from "transit" lines that were not acquiring data as a result of the one-way configuration flown today.

Cumulative Domain Coverage

D07|GRSM_P1 (Great Smoky Mountains National Park Priority 1)

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											

Flown: 14% (10/69)
 Green: 14% (10/69)
 Yellow: 0% (0/69)
 Red: 0% (0/69)

D07 | ORNL (Oak Ridge National Laboratory)

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																			

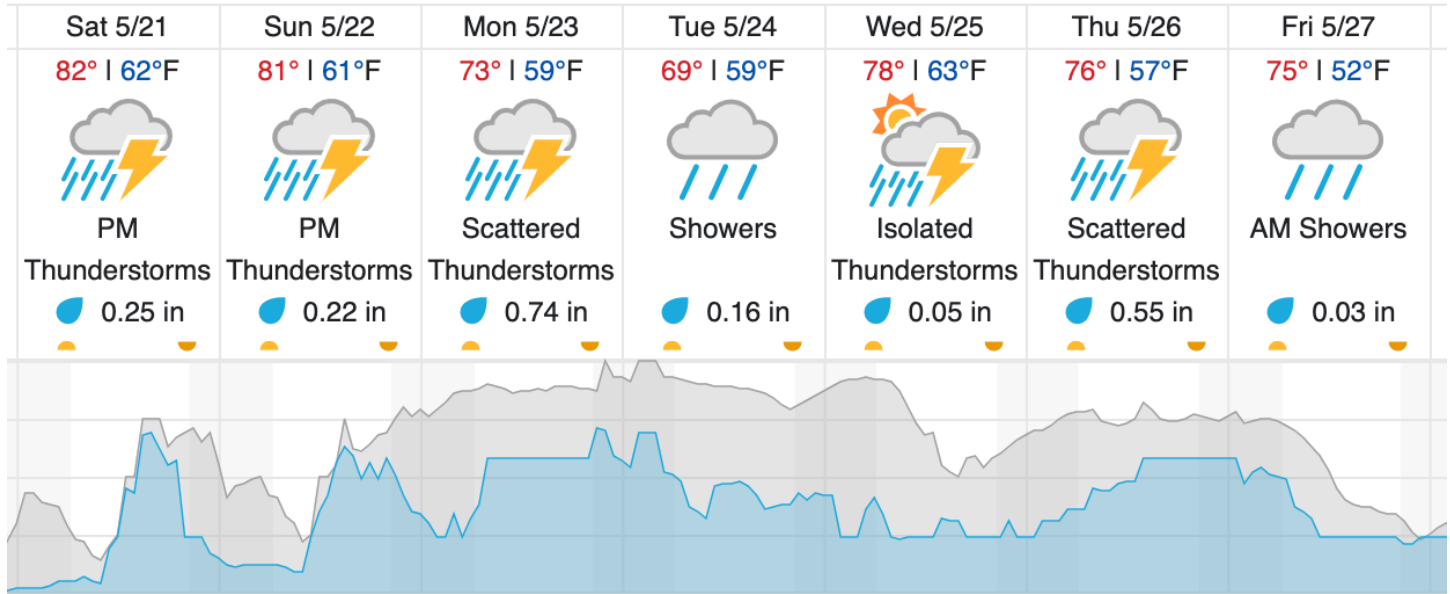
Flown: 44% (27/61)
Green: 26% (16/61)
Yellow: 18% (11/61)
Red: 0% (0/61)

Pictures

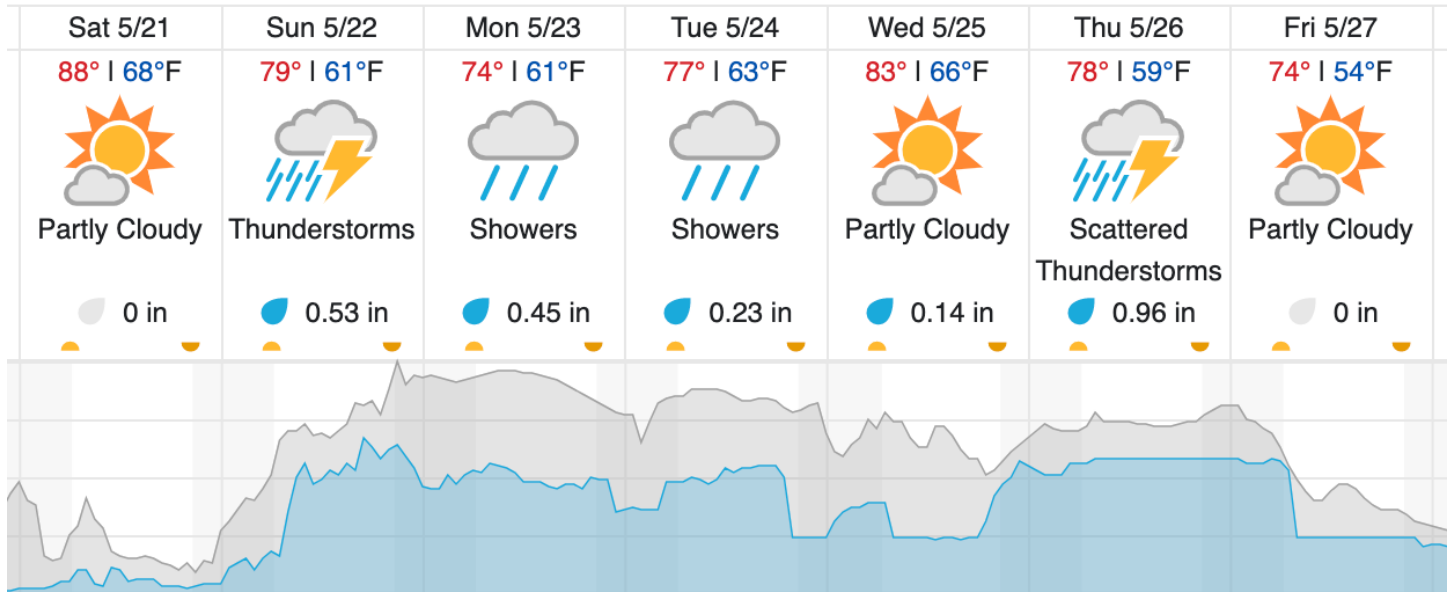


Far off and low cumulus ringed our GRSM site today providing better than normal cloud conditions (not wind and turbulence!). There was some light smoke haze from the New Mexico and Plains fires visible in the air today.

Weather Forecast
Asheville, NC



Oak Ridge, TN



Cloud Cover (%)	Chance of Precip. (%)
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source: wunderground.com

Flight Collection Plan for 20 May 2021

Flyority 1

Collection Area: Oak Ridge National Laboratory (ORNL)

Flight Plan Name: D07_ORNL_C1_P1_v9_PRM.xml

On-Station Time: 1400 UTC / 1000 L

Crew: John (Lidar), Mike (NIS)