



Payload 2 Daily Flight Report



Date: 2026-06-17

Flight Campaign ID: P2C1

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

Aircraft: N821AR

Domain: 07 (Appalachians & Cumberland Plateau)

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

Days left in Domain: 16

Report Author: Mitch

Lidar Operators: Mitch

Spectrometer Operators: Elissa

Pilots: Justin, Skylar

Flight Hours: 03:24

Hours until maintenance: 23.03

GPS Instruments: C-NCHE, NPS-GRSM

Summary

Clear skies over GRSM allowed the crew to complete the initial coverage of the flight area and begin re-flying previously collected non-green lines to improve data quality. Throughout most of the flight, cumulus cloud development remained concentrated west of the flight box at lower altitudes, minimizing impacts within the survey area. However, cloud formation eventually began occurring at flight altitude within the box, forcing an end to collections.

Concerns

Variable-altitude inflection point KMLs were loaded into RiAcquire to evaluate whether ascent/descent calls could be made easier by the lidar operator in RiAcquire rather than the NIS operator in MarsRover. Following data collection, the inflection point KMLs were removed to create a cleaner screenshot of our coverage. During this process, RiAcquire became unresponsive and ultimately crashed. RiAcquire was subsequently reloaded and the raw trajectory data was recovered from the continuously running internal GPS memory backup. No gap in POS data is believed to have occurred.

Comments

None

Daily Coverage

D07|GRSM_P1

Line #	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	56	57	58	59
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover																				

Line #	60
Lidar	✓
Spectrometer	✓
Camera	✓
Cloud Cover	

Total number of lines flown: 21

Estimated Cloud Cover Key

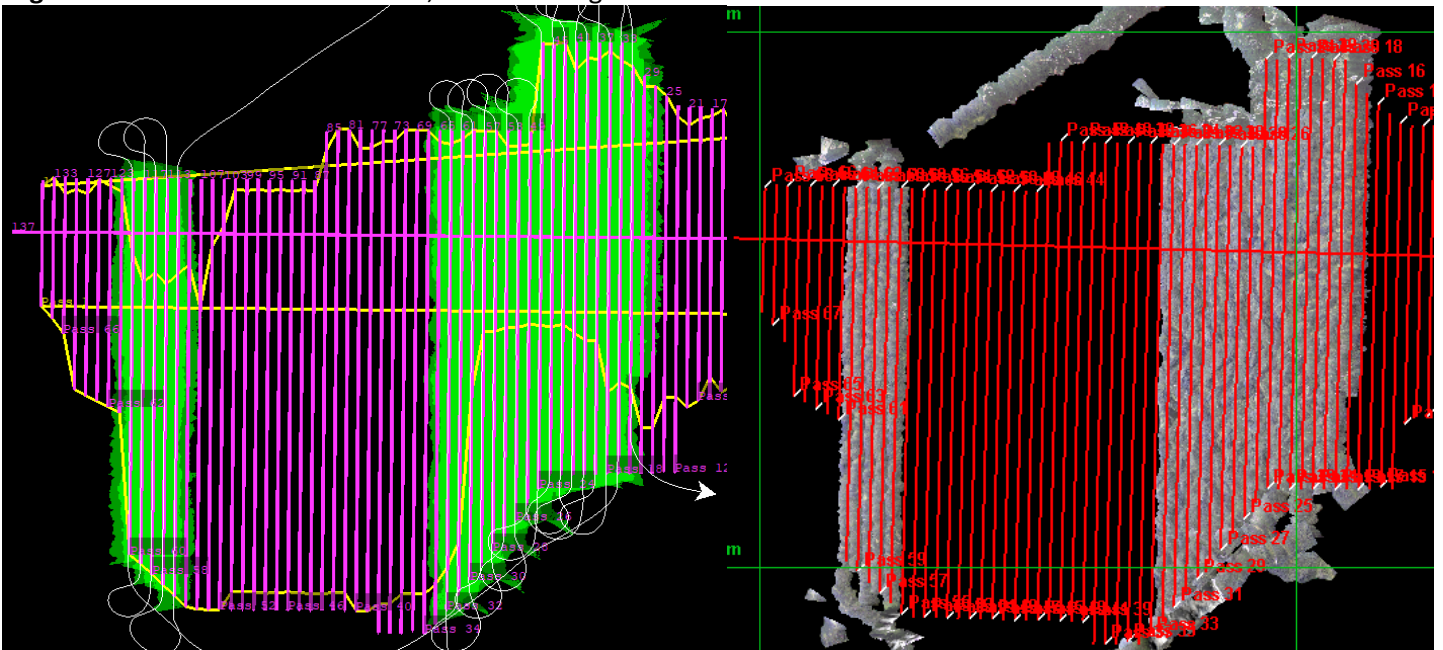
Green:	Yellow:	Red:
0-10%	11-50%	>50%

Solar Angle Less Than 40 degrees: (*)

Pictures: GRSM this morning during the flight.



Flight Screenshots: Lidar on the left, NIS on the right.



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: 100% (69/69)

Green: 62% (43/69)

Yellow: 14% (10/69)

Red: 23% (16/69)

* Flown within 35deg solar angle

D07|GRSM_P2 (Great Smoky Mountains National Park Priority 2)

70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89
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Flown: 100% (20/20)

Green: 0% (0/20)

Yellow: 0% (0/20)

Red: 100% (20/20)

* Flown within 35deg solar angle

D07|MLBS (Mountain Lake Biological Station)

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						

Flown: 0% (0/34)

Green: 0% (0/34)

Yellow: 0% (0/34)

Red: 0% (0/34)

* Flown within 35deg solar angle

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: 61% (37/61)

Green: 28% (17/61)

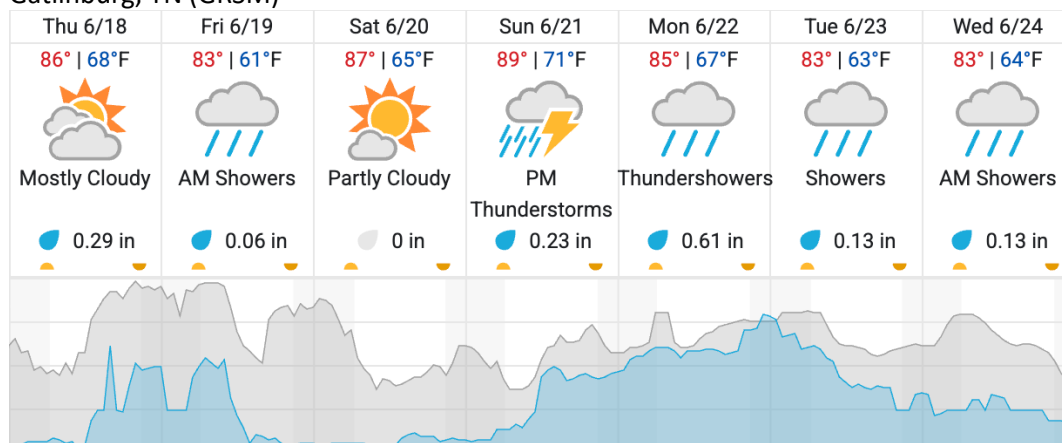
Yellow: 0% (0/61)

Red: 33% (20/61)

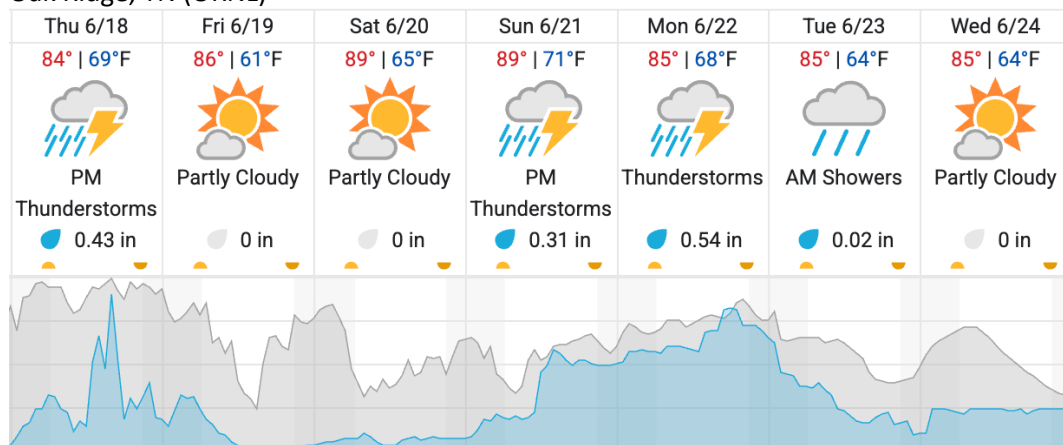
* Flown within 35deg solar angle

Weather Forecast

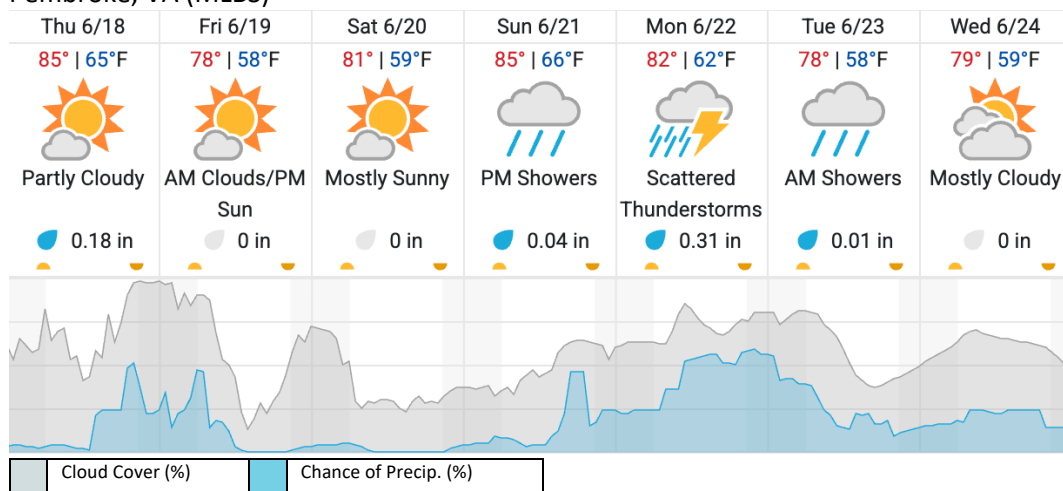
Gatlinburg, TN (GRSM)



Oak Ridge, TN (ORNL)



Pembroke, VA (MLBS)



source: wunderground.com

Flight Collection Plan for June 18, 2026

Flyority 1

Collection Area: Great Smoky Mountains National Park (GRSM) – Priority 1 Flight Box

Flight Plan Name: D07_ D07_GRSM_R1_P1_v6_VarAlt_VQ780

40° On-station Time: 14:00 UTC /10:00L

Flyority 2

Collection Area: Oak Ridge National Laboratory (ORNL)

Flight Plan Name: D07_ORNL_C1_P1_v11_west_VQ780 (lines 1-37, 60) / D07_ORNL_C1_P1_v11_east_VQ780

40° On-station Time: 14:00 UTC / 10:00L

Flyority 3

Collection Area: Mountain Lake Biological Station (MLBS)

Flight Plan Name: D07_MLBS_R1_P1_v8_VQ780

40° On-station Time: 13:50 UTC /09:50L

Flyority 4

Collection Area: Great Smoky Mountains National Park (GRSM) – Priority 2 Flight Box

Flight Plan Name: D07_ D07_GRSM_R1_P2_v6_VarAlt_VQ780

40° On-station Time: 14:00 UTC /10:00L

Crew: Elissa (Lidar), Mitch (NIS)