



Payload 2 Daily Flight Report

Date: 2026-06-04
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), ORNL (Oak Ridge National Laboratory)
Days left in Domain: 29

Report Author: Mitch
Lidar Operators: Mitch
Spectrometer Operators: Cameron
Pilots: Justin, Skylar
Flight Hours: 03:44
Hours until maintenance: 30.13
GPS Instruments: C-NCHE, NPS-GRSM, TDOT-TN10, TDOT-TN1A

Summary

Arrived at GRSM at the start of solar angle only to find low cumulus clouds forming above Kuwohi (Clingmans Dome) along the south-center portion of our GRSM flight box, as well as clouds forming low in valley along the eastern portion of the flight box. It was determined that the far west portion of the flight box was far enough away from the forming clouds to still be considered green. 8 lines were collected before building clouds limited any further collect. The crew then transitioned to ORNL where 17 lines were collected under green conditions.

Concerns

None

Comments

A PDOP spike occurred around 14:25 during today's flight. A similar spike occurred around the same time during yesterday's flight.

Daily Coverage

D07|GRSM_P1

Line #	61	62	63	64	65	66	67	68
Lidar	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover								

Estimated Cloud Cover Key

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

Solar Angle Less Than 40 degrees: (*)

Total number of lines flown: 8

D07|ORNL

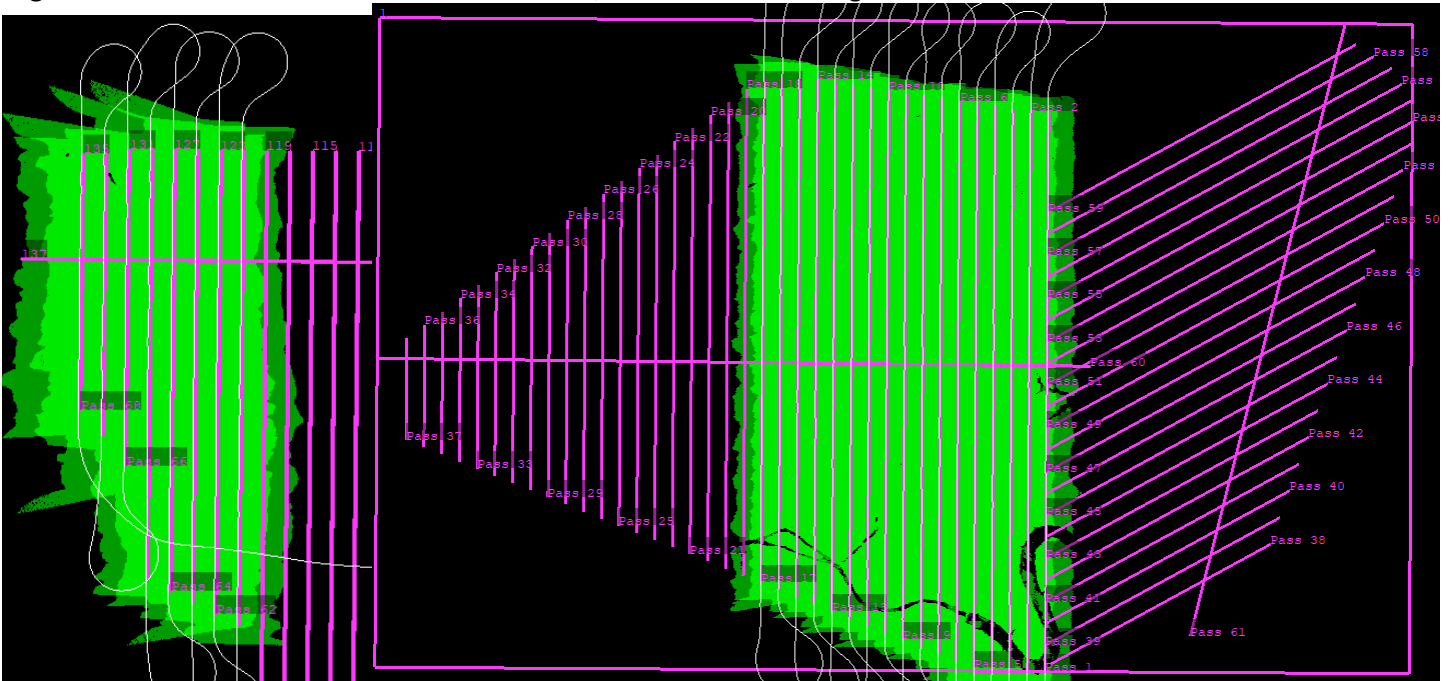
Line #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Lidar	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spectrometer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cloud Cover																	

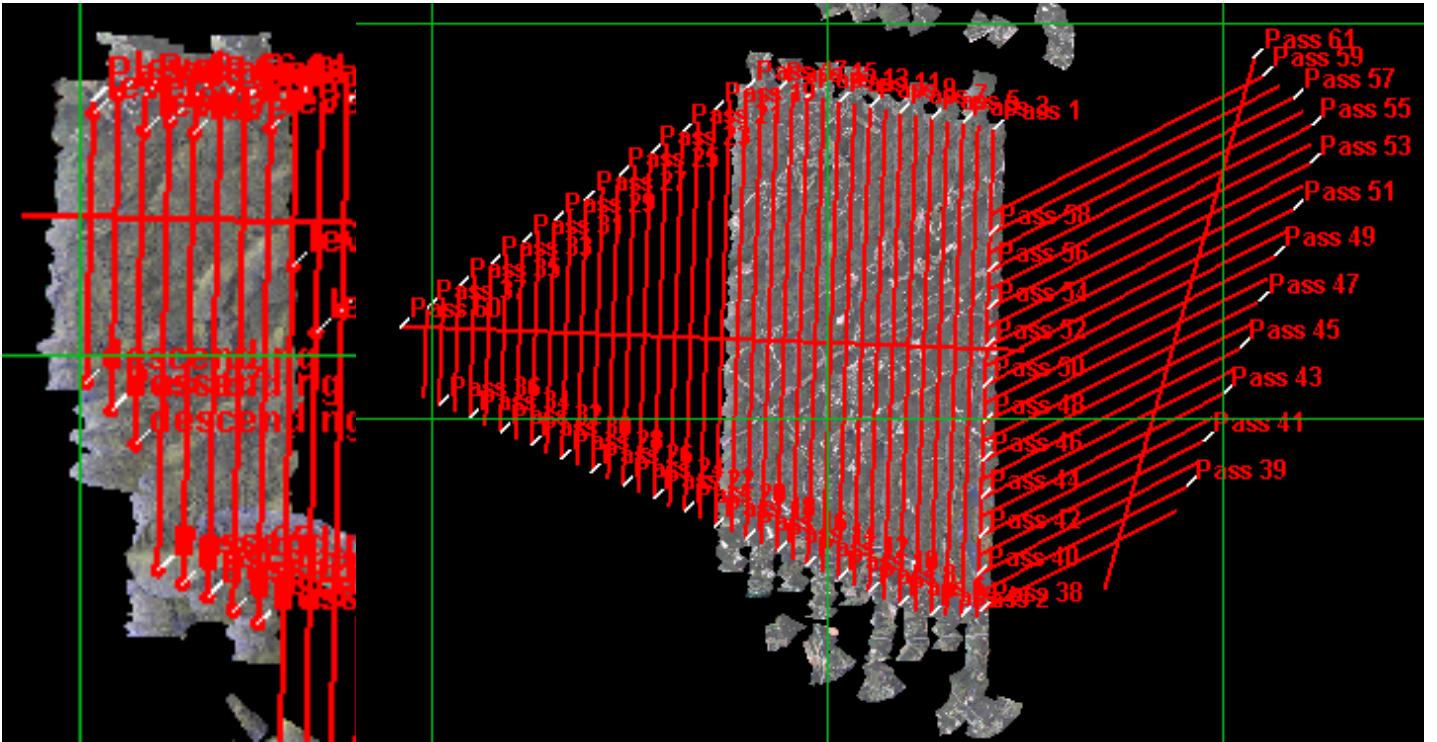
Total number of lines flown: 17

Pictures: Sky conditions above ORNL



Flight Screenshots: Below: GRSM Lidar on the left, ORNL Lidar on the right.





Above: GRSM NIS on the left, ORNL 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: 49% (34/69)

Green: 32% (22/69)

Yellow: 17% (12/69)

Red: 0% (0/69)

* 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
----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Flown: 0% (0/20)

Green: 0% (0/20)

Yellow: 0% (0/20)

Red: 0% (0/20)

* 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)

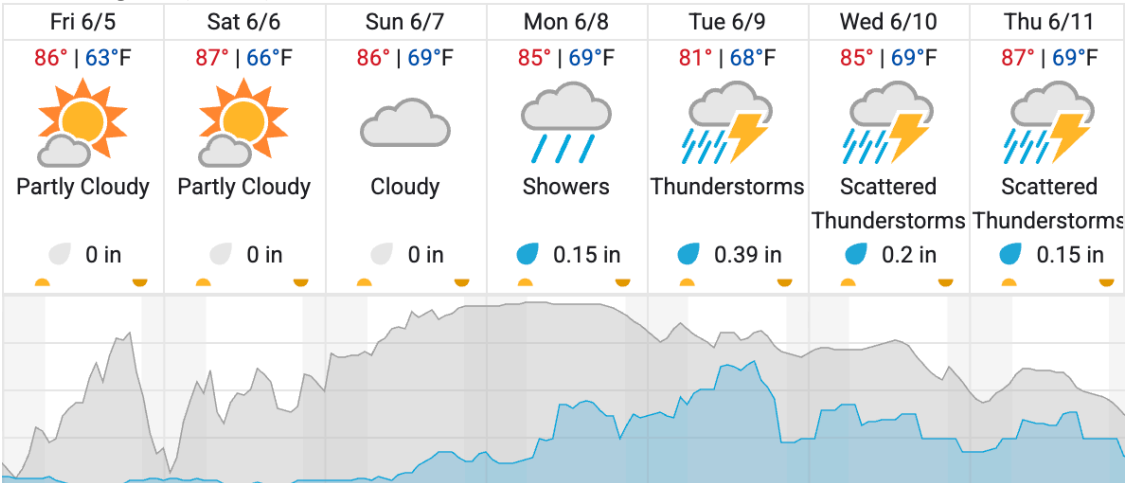
Yellow: 0% (0/61)

Red: 33% (20/61)

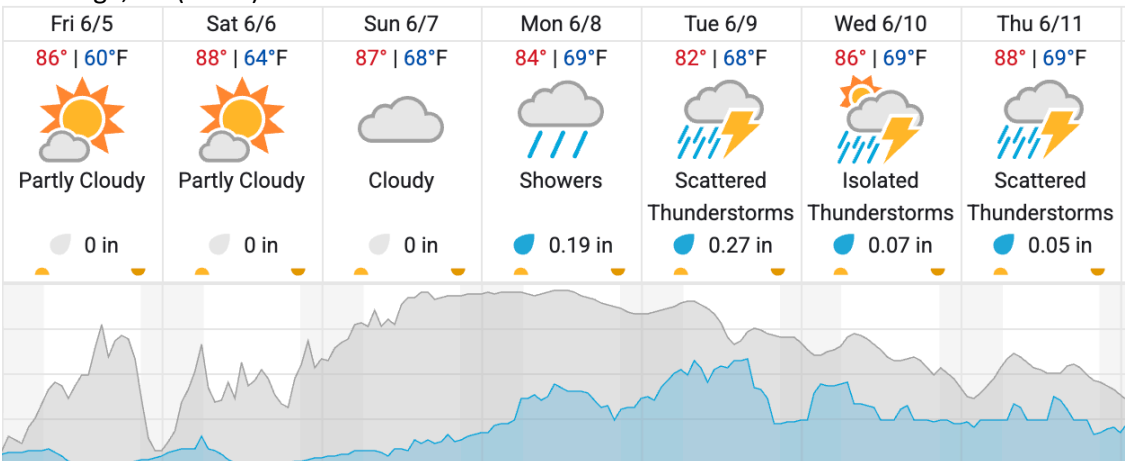
* Flown within 35deg solar angle

Weather Forecast

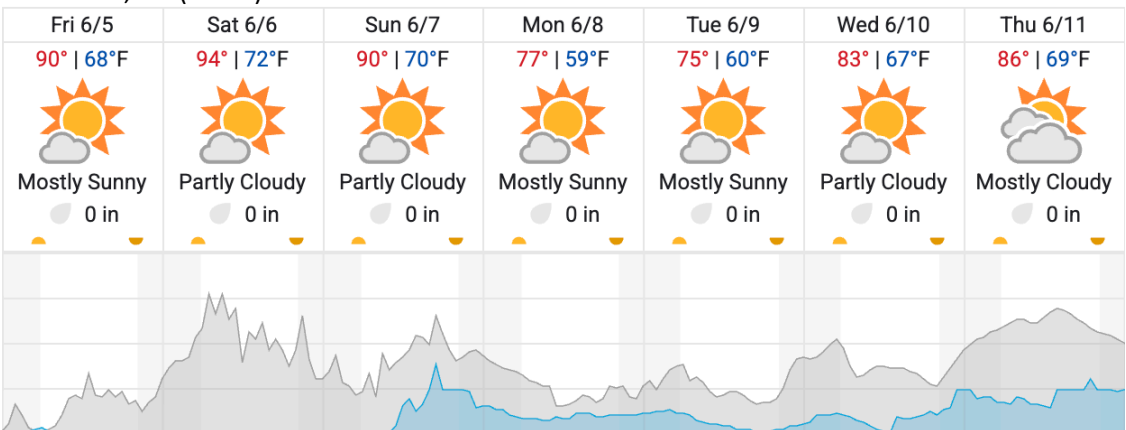
Gatlinburg, TN (GRSM)



Oak Ridge, TN (ORNL)



Pembroke, VA (MLBS)



Cloud Cover (%)	Chance of Precip. (%)
-----------------	-----------------------

source: wunderground.com

Flight Collection Plan for June 5, 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 – *Not to attempt before 6/6*

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: Cam (Lidar), Mitch (NIS)