*This is your quasi-daily update on the 2022 ABoVE Airborne Campaign*

**Saturday 9 July, 2022 (DOY 187)**

Chip Miller is in Fairbanks, AK.

Peter Griffith is in Maryland.

NASA’s 2022 airborne activities are scheduled to include AVIRIS-NG hyperspectral imaging (5 July – 25 August) and the L-band polInSAR (9 August – 22 August). Flights will provide acquisitions across the ABoVE domain in Alaska and northwestern Canada in coordination with ABoVE field work

ABoVE will coordinate with the DLR [CoMet 2.0 Arctic](https://www.halo-spp.de/Missions/CoMet-2-0-Arctic-2022/) (operating from Edmonton ~12 Aug – 15 Sep), [G-LiHT](https://gliht.gsfc.nasa.gov/) (6-30 July in southern/SW Alaska), and [NEON AOP](https://www.neonscience.org/data-collection/flight-schedules-coverage) (operating out of Deadhorse AK 20 July – 22 Aug) teams.

More information may be found on the summary page for the [ABoVE 2022 Airborne Campaign](https://above.nasa.gov/airborne_2017.html#2022)

**Sensor/Aircraft Summaries and 72-hour Look Aheads**

**AVIRIS-NG (Dynamic Aviation B-200**[**N53W**](https://flightaware.com/live/flight/N53W)**)**

*July 2*: Transit Great Falls MT (GTF) – Bellingham, WA – Juneau, AK – Fairbanks, AK

*July 3*: Crew rest day; Clean AVIRIS window

*July 4*: Hard Down Day; >5000 lightning strikes forecasted for AK

Jackie Hung and a Woodwell research team are in the YK Delta

*July 5*: First flight day.

Excellent cloud-free conditions found in several locations, but ALL LINES had significant low level smoke interference. It was impossible to see the ground in several locations. These are likely the conditions in Alaska until the August rains begin to extinguish the large wildfires.

Cloud front was further east than forecasted, so Beaver AK area box was aborted after 1 line. Moved north along the Dalton Hwy into less cloudy areas. Acquired several lines in the Toolik Lake area before clouds moved in there. Returned to the Fairbanks area where boxes over the Goldstream Valley, Nugget fire scar, and the BNZ LTER/APEX targets were acquired

*July 6*: Flight day #2.

Flew Beaver, AK grid, Coldfoot and Bettles lines, Grouse Creek fire scar grid, Hess Creek fire scar line, and CPCRW/flux towers line. Less smoky conditions in the north, but still far from ideal. Visible wavelengths severely compromised.

*July 7*: Down Day

Resetting crew clocks in advance of extended good weather forecasts

*July 8*: Down Day

Replacement pilot arrival delayed due to cancelled flight

*July 6*: Flight day #3.

Forecast for clear skies and low smoke over eastern North Slope

Flew lines over Dalton Hwy, Anaktuvuk River fire scar, Nuiqsut, and Deadhorse areas. Attempted flights over North Slope coastal boxes, but sea ice still covered more than 50% of the lines – will need to revisit these lines towards the end of July

Shawn Serbin and NGEE-Arctic team members arrived in Nome and are in place to support AVIRIS overflights of the Seward Peninsula sites

Kyle Kovach and Univ Wisconsin field team arrived in Fairbanks and will begin collecting foliar samples

* Priority 1 = Deadhorse/Barrow Areas.
* Priority 2 = YK Delta.
* Priority 3 = Interior AK/Fairbanks Area

*July 10*: Potential flight day.

Forecasts for extensive clear skies over western Alaska from Barrow to Bethel.

Targeting flight opportunities in the YK Delta. Backup will be Noatak/Kotzebue, Seward Peninsula regions

*July 11*: Potential flight day.

Continued clear skies in western Alaska

*July 11*: Potential flight day.

Opportunity for flights in the Noatak/Barrow areas

**G-LiHT (Dynamic Aviation Beechcraft King Air** [**N80Y**](https://flightaware.com/live/flight/N80Y)**)**

Integration & Testing (Bridgewater, VA):  28-30 June 2022

Transit to AK: 1-6 July 2022

Base of Operation and Dates :

Kodiak, AK -- 6-16 July 2022

Aniak, AK -- 16-26 July 2022

Kodiak, AK -- 26-30 July 2022

[Description of science flights and motivation](https://above.nasa.gov/airborne_2017.html#2022)

*July 2*: G-LiHT transits from Bridgewater VA – Perry, IA

*July 3*: G-LiHT transits from Perry IA – Sheridan County, WY

*July 4*: G-LiHT transits Sheridan County, WY – Wenatchee, WA

*July 4*: G-LiHT transits Sheridan County, WY – Wenatchee, WA – Juneau, AK

*July 5*: G-LiHT transits Juneau, AK – Kodiak AK; in position to begin operations

*July 6*: G-LiHT in Kodiak AK; no flights on tracker

*July 9*: G-LiHT in Kodiak AK; 2 sorties near King Salmon, AK

**NEON Airborne Observation Platform #1 (**[**Daily Flight Reports**](https://www.neonscience.org/data-collection/daily-flight-reports)**)**

July 17 – Transit through Fairbanks

July 18 – Aug 22: First candidate flight day – Toolik Lake area

**L-band SAR (JSC G-III**[**NASA2**](https://flightaware.com/live/flight/N992NA)**)**

June - July: planned non-ABoVE CONUS flights

Aug 9: Transit Houston – Saskatoon (TBC)

Aug 10: BERMS area TomoSAR

Aug 11: Transit to Yellowknife

**CoMet 2.0 Arctic (HALO G-550**[**D-ADLR**](https://flightaware.com/live/flight/DADLR)**)**

Aug 6: Transit to Edmonton

Aug 10: First candidate flight day

**Weather Forecast: ABoVE Domain**

GEOS-FP for ABoVE: <https://fluid.nccs.nasa.gov/missions/mission_ABOVE/>

HRRR for Alaska: <https://rapidrefresh.noaa.gov/alaska/>

Windy weather visualization: [https://www.windy.com/](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.windy.com%2F&data=05%7C01%7Cpeter.c.griffith%40nasa.gov%7Cad658dc1e59a4d3cac4008da57aa3f21%7C7005d45845be48ae8140d43da96dd17b%7C0%7C0%7C637918685965419609%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=9VKGntYPS4KZXym6nEFk%2FRvIog08d5is%2FkyO0qX2RoE%3D&reserved=0)

FAA Weather Cameras – Interactive map with Alaska and Canadian cameras: <https://weathercams.faa.gov/>

Alaska Fires and Smoke Predictions: <http://smoke.alaska.edu/current_fires.html>

**Fire activity updates 7/9/22** <http://smoke.alaska.edu/current_fires.html> :

Dense smoke advisory for Fairbanks

2100 AKDT on 7/7/22: Fairbanks AQI = 376 <https://www.iqair.com/us/usa/alaska/fairbanks>

Lightning strike map

<https://www.arcgis.com/apps/webappviewer/index.html?id=f5c311fa930d4831916c3f27984e97fd&extent=-21498469.1666%2C7047820.6016%2C-12281998.0441%2C11636488.2836%2C102100>

Multiple large fires burning west of Fairbanks:

* Minto Lakes (36,763 acres, +2300 acres since 7/7/22)
* Tanana River (22,985 acres, +2700 acres since 7/7/22)
* Clear (69,748 acres, +14,200 acres since 7/7/22) – continued evacuations of Clear, AK and neighboring areas ordered
* Chitanana (78,761 acres, +10,000 acres since 7/7/22)

Multiple large (>100,000 acre) fires burning in SW Alaska and the YK Delta contributing to smoky conditions across Interior AK. Fires of particular note:

* Douglas (20,300 acres) south of Coldfoot is burning on both sides of the Dalton Hwy and may impact travel between Fairbanks and Deadhorse
* Hog Butte (197, 900 acres) between Lake Minchumina and Nikolai
* Tatlawiksuk (226,000 acres), Aghaluk Mountain (116,000 acres), and Koktuli River/Pike Creek (188,200 acres) causing smoke over most of western and Interior AK
* East Fork (167, 000 acres) and Apoon Pass (84,000 acres), both near St Mary’s

\*\*\* Ground truth providers seeking information on timing of potential overflights should text or email Chip Miller and Peter Griffith \*\*\*

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