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

**Monday 11 July, 2022 (DOY 191)**

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 9*: 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

*July 10*: Flight day #4.

Forecast for clear skies and no smoke over the Kotzebue/Noatak region

Tranist – entire Interior filled with smoke south of the Brooks Range

Sortie #1: flew Noorvik and Kotzebue grids

Sortie #2: flew all Lower and Upper Noatak Valley lines and part of the Selawik grid

Outstanding conditions all day long: clear skies and no smoke

Observed scattered clouds over the Seward Peninsula with increasing high cirrus during the day

Returned to dense smoke advisory in Fairbanks

*July 11*: Down Day

Clouds moving in across Alaska, no combination of clear skies and smoke-free conditions in any priority areas, so called for a down day after 2 long flying days

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 Wiseman collecting foliar samples

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

*July 12*: Potential flight day.

Forecasts show possible clear skies over Seward Peninsula and Kotzebue area in the afternoon. Will watch closely between now and 0800 7/12/22

*July 13*: Potential flight day.

Possible clear sky conditions over Barrow/western North Slope, Noatak and Seward Peninsula

*July 14*: Potential flight day.

Current forecasts show pervasive clouds across Alaska. Will watch for updates

**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

*July 10*: G-LiHT in Kodiak AK; 2 sorties near King Salmon, AK

*July 11*: G-LiHT in Kodiak AK; flying near Dillingham, AK @ 1516 AKDT

**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 7/11/22** <http://smoke.alaska.edu/current_fires.html> :

1400 AKDT on 7/11/22: Fairbanks AQI = 158 <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 (37,523 acres, +800 acres since 7/9/22)
* Tanana River (23,620 acres, +600 acres since 7/9/22)
* Clear (69,748 acres, no change since 7/9/22) – continued evacuations of Clear, AK and neighboring areas ordered
* Chitanana (84,076 acres, +5200 acres since 7/9/22)

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 (20,945 acres) south of Coldfoot is burning on both sides of the Dalton Hwy and may impact travel between Fairbanks and Deadhorse
* Hog Butte (199, 436 acres) between Lake Minchumina and Nikolai
* Tatlawiksuk (226,000 acres), Aghaluk Mountain (116,000 acres), and Koktuli River/Pike Creek (205,866 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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