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

**Tuesday 5 July, 2022 (DOY 185)**

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

*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

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

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

*July 6*: Candidate flight day.

Forecast for dense cloud cover across Western Alaska and the North Slope, especially high priority coastal areas. Area of clear skies in eastern Alaska from Valdez to Fort Yukon offers multiple flight opportunities

Beaver AK should be clear in the morning. Coldfoot line + Minto, Rampart, and Shovel Creek fire scar boxes will be targets later in the sortie

*July 7*: Potential flight day.

Dense cloud cover across Western Alaska and the North Slope, especially high priority coastal areas. Area of clear skies from Delta Junction to Northway in SE Alaska

*July 8*: Potential flight day.

Cloud cover across Western Alaska and the North Slope begins to dissipate. Watch for potential opportunities in these 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

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

July 20: 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 10: Transit to Edmonton (TBC)

Aug 12: 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>

*Long-range forecast:*

*Wed 6 July*: Solid cloud over western AK and the North Slope. Band of clear skies in eastern AK from Valdez to Fort Yukon

*Thu 7 July*: Solid cloud over western AK and the North Slope. Clear to partly cloudy in near Delta Junction. PM: Increasing clouds and possible thunderstorms

*Fri 8 July*: Cloud over western AK and the North Slope begins to dissipate. Partly to mostly cloudy across the rest of Alaska for the next several days

**Fire activity updates 7/5/22** <http://smoke.alaska.edu/current_fires.html> :

2030 AKDT on 7/5/22: Fairbanks AQI = 177 <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>

3 large fires burning west of Fairbanks:

* Minto Lakes (34,386 acres, +1700 acres since 7/4/22)
* Tanana River (18,466 acres, +2000 acres since 7/4/22)
* Clear (52,987 acres, +1,800 acres since 7/4/22)

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 (18,844 acres) south of Coldfoot is burning on both sides of the Dalton Hwy and may impact travel between Fairbanks and Deadhorse
* Hog Butte (185, 400 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
* Pauls Creek (18,000 acres) and Contact Creek (10,000 acres) fires may impact King Salmon area data acquisitions

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

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