National Aeronautics and Space Administration

EXPLORE AIRBORNE SCIENCE NEWSLETTER

Spring 2026

Leadership Corner

Thank you for taking the time to reconnect with the NASA Earth Science Division Airborne Science Program (ASP). ASP continues to prosper, creating and flight-testing new instruments, supporting space-based missions, and deepening our understanding of Earth's processes.

Over the past 6 months, we have supported NASA teams working on current and future spaceborne missions including ECOSTRESS, EMIT, GOSAT-GW, NISAR, and MAIA, through calibration, validation, and complimentary data collection during airborne missions like AirMSPI-2, NURTURE, air-LUSI, Tokyo-FC, GEMx, and UAVSAR.

ASP also continued to make significant progress in its multiyear effort to modernize operations, replacing aging platforms with newer and more capable aircraft. Science modifications to the newly acquired GV are going smoothly. The aircraft will join the B777 in flying inaugural missions in FY27.

Finally, we extend a heartfelt congratulations to Marilyn Vasques on her retirement after 37 years of service with NASA. She made lasting contributions to the Agency, supporting Life Sciences and ESPO. We all hope she enjoys a well-deserved retirement.

Thanks for your support of Airborne Science, and please let us know how we can help move Earth Science forward.

Derek Rutovic
Program Executive,
Airborne Science Program

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Farewell to Marilyn Vasques

Contributed by Erin Czech (NASA ARC)

Marilyn's relationship with NASA Ames Research Center began as a teenager in 1976, where she worked in a NASA lab one day each week during her senior year of high school. During that time, she entered a science fair and won a fellowship to work for NASA that summer.

In 1985, after receiving a degree in Zoology from UC Davis, she became a NASA Contractor in Life Sciences, supporting basic research and science experiments aboard the space shuttle. Marilyn became a civil servant in 1989.

During her 20 years in Life Sciences, she played many different roles, supporting projects on 21 space shuttle flights, and 3 Russian Biosatellite Missions. When the Challenger was lost and the NASA Space Shuttle program was on hold, she was on a team that worked with the Institute for BioMedical Problems (IMBP) in Soviet Russia to collaborate on two of their Cosmos Satellite launches. When the Shuttle began flying again, Marilyn was a key member of the team to collaborate with the Russian scientists on similar projects, sharing samples from experiments aboard the shuttle flight SLS-1. Marilyn was also the logistics manager of STS-90 (Neurolab) and Fundamental Space Biology Program Project Scientist for STS-107. In addition, she coordinated hypergravity studies, was a member of the Animal Care and Use Committee and was the Science Manager for a follow-on Russian Foton project. She was also the Animal Enclosure Module Project Lead, Space Station Biological Research Project Science Lead, Science Logistics Manager, Science Operations Lead and Assistant Branch Chief.

Many of these roles she successfully managed concurrently. Marilyn then moved to Earth Science in 2006.

Marilyn supported more than 20 airborne science campaigns in a variety of roles and became the Science Operations Flight Request manager for the NASA Airborne Science Program. In 2007, she successfully managed the TC4 (Tropical Composition, Cloud and Climate Coupling) project in Costa Rica and Panama that included 3 aircraft, 2 radars and over 600 people.

In 2010, Marilyn was the Project Manager for one of the first Earth Venture Suborbital (EVS-1) projects, HS3 (Hurricane and Severe Storm Sentinel, using the Global Hawk aircraft. She helped set standards for ESPO's role in the 9 additional ESPO-managed EVS missions to follow.

In 2015, she became the Director of ESPO and led the team to provide project management, coordination, and logistics for complex, multi-aircraft, international campaigns for another decade. During her tenure at ESPO, ESPO became an ARC Branch (SGP) and subsequently, Marilyn became the Branch Chief.

Figure 1: *The ESPO team at Ames Research Center during the NASA TC4 mission in 2007. From the top row: Marilyn Vasques, Mike Gaunce, Mike Craig, Quincy Allison, Dan Chirica, Sue Tolley, Steven Gaines, and Kent Shiffer. Credit: NASA*

Figure 2: *Marilyn Vasques in the cockpit of the DC-8 during 2006 over Alaska. The photo also includes Doug Baker, Bill Brockett, and Bill Hoss. Credit: NASA*

Figure 3: *Marilyn Vasques coordinating dropsondes for the HS3 Mission as Mission Manager in the GHOC at Wallops Flight Facility on August 1, 2013. Credit: NASA*

During Marilyn's career, she also supported student outreach activities as a guest speaker at local organizations such as the San Jose Tech Museum and various clubs and classrooms—from Kansas to Hawaii. For several years, she was a NASA judge at the Santa Clara County Science and Engineering Fair, guest speaker for the Space Life Sciences Training Program and mentor for the Summer High School Apprenticeship Research Program (SHARP) and DeAnza College Program.

Marilyn received many honors and awards during her career — two NASA Exceptional Achievement Medals, a NASA Exceptional Service Medal, and an ARC Supervisor/ Manager Honor Award — as well as two Safety Awards and forty Group Achievement awards.

Thank you, Marilyn, for being such a vital part of the NASA community. Your dedication has made a lasting impact, and you will be deeply missed.

Airborne Multiangle SpectroPolarimetric Imager (AirMSPI-2)

Contributed by Felix Seidel, David Diner, Markus Scheucher, Charles Wang, Brian Rheingans, and Ryan Applegate (JPL, CalTech)

JPL's second-generation Airborne Multiangle SpectroPolarimetric Imager (AirMSPI-2) completed its first science flights onboard NASA's ER-2 aircraft at Armstrong Flight Research Center (AFRC) in April 2025. These flights mark a significant step forward in NASA's airborne remote sensing capabilities, delivering high-quality, multiangle polarimetric data across the ultraviolet, visible, near-infrared, and shortwave infrared spectrum essential for detailed characterization of aerosol, cloud, and Earth surface properties. Data from these flights will be publicly available at the NASA Atmospheric Science Data Center (ASDC): https://asdc.larc.nasa.gov.

As the closest airborne analog to the upcoming Multi-Angle Imager for Aerosols (MAIA) satellite mission, scheduled for launch in mid-2026, a primary objective of AirMSPI-2 is to support the development and validation of MAIA's retrieval algorithms and data products. MAIA's mission is focused on studying aerosol impacts on air quality and human health.

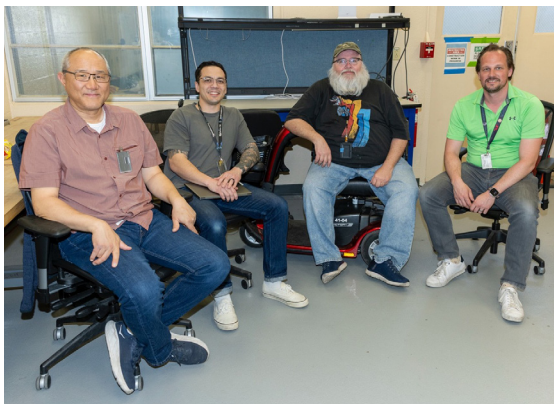

Figure 4: *JPL engineers supporting the April 2025 AirMSPI-2 deployment at AFRC. From left to right: Charles Wang, Ryan Applegate, Brian Rheingans, and Markus Scheucher. The team led key hardware upgrades enabling successful science flight performance demonstrated during recent flights. Credit: Genaro Vavuris / NASA AFRC.*

Figure 5: *AirMSPI-2 installed in the nose cone of NASA's ER-2 high-altitude aircraft at Armstrong Flight Research Center. April 2025 marked its first successful science deployment, collecting multi-spectral data critical for aerosol and surface studies. Credit: Genaro Vavuris / NASA AFRC.*

Building on the original AirMSPI heritage documented by Diner et al. (2013), AirMSPI-2 incorporates significant upgrades, including expanded spectral coverage through the addition of oxygen A-band and shortwave infrared channels. These capabilities required a redesigned optical system housed in a vacuum-sealed enclosure and supported by a cryocooling system to stabilize infrared detector temperatures.

Engineering flights in October 2015, April 2023, and October 2023 highlighted technical challenges with vacuum control and maintaining stable detector temperatures. Between late 2023 and early 2025, the project team implemented targeted hardware upgrades, including a higher capacity cryocooler. These improvements resolved prior limitations, enabling stable cryogenic performance and reliable science data collection during the 2025 deployment.

Looking ahead, AirMSPI-2's robust multiangle polarimetric imaging, extended spectral range, and stable instrument performance make it well-suited for future NASA Airborne Science activities. The instrument is expected to contribute to a wide range of investigations, including air quality, aerosol-cloud interactions, and surface reflectivity, advancing scientific understanding of key atmospheric and terrestrial processes and supporting broader Earth system science objectives.

Figure 6: *NASA's ER-2 aircraft carrying the AirMSPI-2 science instrument payload in the nose cone during MAIA science and launch preparation flights. Credit: Carla Thomas / NASA AFRC.*

NURTURE: A High-Impact Mission for High-Impact Weather

Contributed by Brenna Biggs (BAERI / NASA ARC), Amin Nehrir (NASA LaRC)

Figure 7. *The NURTURE Team in front of the NASA G-III in Canada. Credit: Dan Chirica / NASA*

Nestled among the snow-laden town of Happy Valley-Goose Bay (NL, Canada) scientists bundle up against -25 °F temperatures to prepare for scientific flights aboard the NASA G-III aircraft.

The NASA-funded North American Upstream Feature-Resolving and Tropopause Uncertainty Reconnaissance Experiment (NURTURE) is a multi-year large-scale field campaign collecting data in remote frigid locations – which makes Happy Valley-Goose Bay ideal as home base. NURTURE will help scientists better understand the processes leading up to wintertime high-impact weather (HIW) – this includes how cold dry air from tropopause polar vortices (TPV) interact with the jet stream and tropospheric weather to create heavy winds, snow, rain and ice as well as hazardous sea conditions that threaten lives, infrastructure, and the environment.

NURTURE is using the NASA G-III aircraft with various scientific instruments to study how the atmosphere and ocean interact – and how well we can currently predict those interactions – at high northern latitudes. The data gathered on these flights will advance our understanding of meteorological dynamics, predictability, and forecasting – particularly near the polar jet stream.

What is the jet stream?
Jet streams are fast-moving air currents in the atmosphere, particularly in the tropopause (the "T" in NURTURE!). They are westerly winds, meaning they move from west to east around the planet. These currents are important as they can affect weather and aviation flight routes. In the Northern Hemisphere near the polar vortex, there is a polar jet stream moving over 100 mph about 30,000 feet above the ground – perfect to sample with the NASA G-III aircraft, which can fly up to 45,000 feet.

NURTURE Instrumentation
In winter 2026, NURTURE flew flying three main instruments: High-Altitude Lidar Observatory (HALO), CloudCube radar, Advanced Vertical Atmospheric Profiling System (AVAPS) dropsondes, in-situ trace-gas (O3, N2O, CO2, CH4, CO), and Airborne Radio Occultation (ARO). HALO, together with CloudCube, will provide vertical profiles of aerosols, moisture, and clouds. CloudCube's combined Ka-, W-, and G-band pulsed-compression radar will allow NURTURE scientists to establish – for the first time – comprehensive details about clouds and precipitation near the northern polar vortex.

Coupled with aerosol and moisture profiles from HALO, NURTURE scientists will be able to investigate the role of clouds in the development of high latitude winter storms. The AVAPS dropsondes, which are launched directly from the G-III aircraft, provide vital information about the wind conditions near the jet stream. The in-situ trace-gas observations provide critical insight on the atmospheric mixing at the tropopause, providing mechanisms for transport of cold dry air from tropopause polar vortices down to the lower atmosphere. Together, these data will help to quantify how, where, and why TPVs from, how they interact with the subtropical jet stream, and how those interactions result in HIW events.

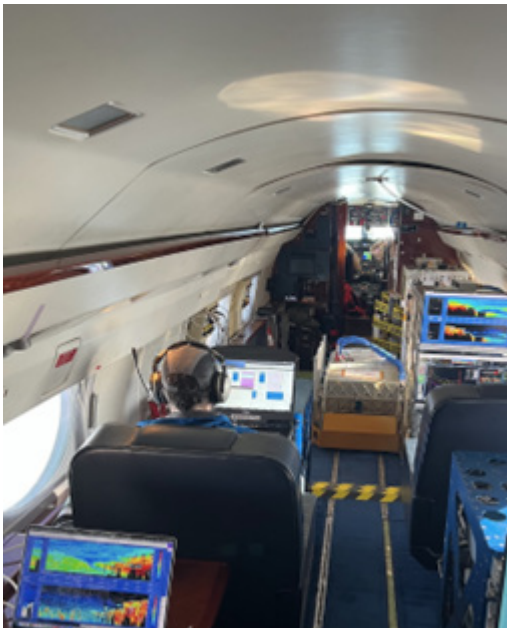

Figure 8: *The NURTURE payload inside the NASA G-III on Research Flight 03. The HALO lidar and CloudCube radar can be seen in the background with their respective instrument operator racks. In-situ trace gas and Mission Science stations are in the foreground. Credit: Amin Nehrir / NASA LaRC*

NURTURE Status and Future Plans

During its first winter campaign (January / February 2026), NURTURE completed 20 science flights (~100 hours), focusing on the Atlantic Ocean near the Eastern seaboard as well as Canadian provinces: Newfoundland and Labrador (home to Happy Valley-Goose Bay) Quebec, Ontario, and Nova Scotia. In addition to the HALO and CloudCube measurements from the aircraft, the AVAPS team launched over 70 dropsondes to create vertical profiles of atmospheric state including temperature, humidity, and winds.

In early 2027, NURTURE will return to the Canadian winter wonderland with one of NASA Airborne Science Program's newest fleet members: the Boeing 777 (B777) flying laboratory. NURTURE will be the inaugural science campaign for the B777. This large aircraft will provide room for an even larger payload, including HALO, High Spectral Resolution Lidar 2 (HSRL-2), Airborne Precipitation Radar-3 (APR-3), Aerosol Wind Profiler (AWP), CloudCube, Vapor Inside-cloud Profiling Radar (VIPR), Configurable Scanning Submillimeter-wave Instrument/ Radiometer (CoSSIR), Conical Scanning Millimeter-wave Imaging Radiometer – Hyperspectral (COSMIR-H), Scanning High-Resolution Interferometer Sounder (S-HIS), AVAPS dropsondes, Diode Laser Hygrometer (DLH), Turbulent Air Motion Measurement System (TAMMS), Broadband Radiometers (BBR), Microwave Barometric Radar and Sounder (MBARS), ARO, and in-situ aerosol measurements.

NURTURE scientists will use the B777's expanded duration (18 hours) and range (9,000 Nmi) to further quantify the impact that atmospheric disturbances near the northern polar jet stream have on jet stream variability – a high-impact mission to study high-impact weather events.

Airborne Lunar Spectral Irradiance (air-LUSI): A Fly-by-Night Calibration

Contributed by Brenna Biggs (BAERI / NASA ARC)

During a near-freezing February night in the Mojave Desert, the Moon lit up the sky as a NASA pilot flew the ER-2 aircraft up to 65,000 feet – over twice as high as Mount Everest. On this specific night, and for 4 consecutive nights afterward, the pilot flew the aircraft on behalf of the Airborne Lunar Spectral Irradiance (air-LUSI) mission. Instruments onboard took extremely accurate measurements of the Moon's lunar spectral irradiance, which will be used for calibrating thousands of spaceborne observations of Earth.

What is lunar spectral irradiance?

Lunar spectral irradiance refers to the different wavelengths of sunlight that are reflected by the lunar surface. These vary each night based on the Moon's phase. These reflections are important, not only because they allow us to visually enjoy the Moon from Earth, but because scientists use the Moon to calibrate Earth-observing satellites and instruments.

There is currently a 5-10% uncertainty in our understanding of lunar spectral irradiance occurring above Earth's atmosphere. By using the ER-2 aircraft to bring air-LUSI instrumentation to an altitude above 95% of the atmosphere, this uncertainty becomes much less than 1%.

Air-LUSI Instrumentation, Flights, and Impact

During the air-LUSI mission, a superpod in the ER-2's wing supported the following payload:

- IRIS (IRradiance Instrument Subsystem), a telescope with a spectrometer to measure the Moon's reflected light, or lunar spectral irradiance
- ARTEMIS (Autonomous, Robotic TElescope Mount Instrument Subsystem), which compensates for the motion of the aircraft to keep IRIS focused on the Moon

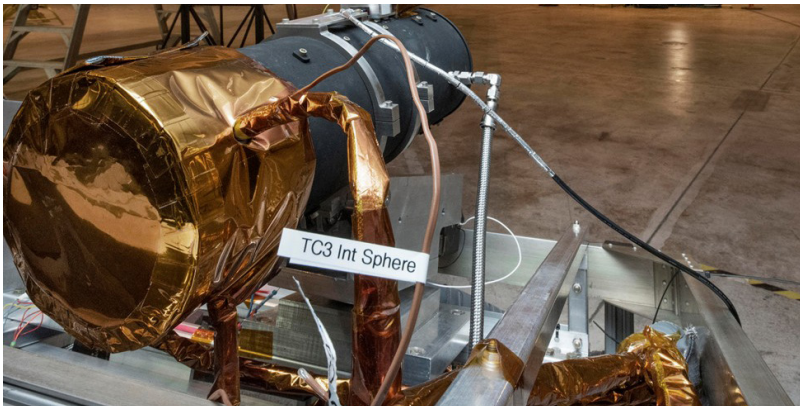

Figure 9. *The air-LUSI telescope, IRIS, being calibrated by artificial moonlight in the ER-2 hangar at NASA AFRC. Credit: Ken Ulbrich / NASA*

The air-LUSI mission has been flying regularly since November 2019, racking up 44 flight hours total. Nearly 12 of these hours were flown earlier this year from NASA AFRC at Edwards Air Force Base in the Mojave Desert. Air-LUSI flew every night from February 1st through 5th, with some flights reaching as far as Nevada.

Each air-LUSI flight was about 2 hours long and carefully timed to collect 30 minutes of spectral irradiance data from high altitude (~ 65,000 feet) when the Moon is at its maximum, or "lunar noon." Scientists use these measurements to adjust the current models of lunar spectral irradiance used to calibrate many Earth-observing satellites (e.g., PACE, NISAR, Landsat, and countless more) that use the Moon as a reference standard, significantly enhancing the speed of on-orbit satellite calibration. The ability to calibrate without the need for additional hardware is a huge boon for small satellites, like CubeSats, that do not have available payload space for onboard calibration equipment.

Having reliable, timely, and accurate spaceborne measurements is critical for Earth observations that directly impact many important industries and activities worldwide: agriculture and forestry, water and air quality, resource management, weather forecasting, disaster planning, firefighting, and more. The air-LUSI and NASA ER-2 teams continue to play crucial roles in gathering and validating these observations.

Figure 10. *NASA ER-2 taking off for nighttime flights with air-LUSI out of NASA AFRC. Credit: Ken Ulbrich / NASA*

GEMx: Mapping Critical Minerals from the Air

Contributed by Brenna Biggs (BAERI / NASA ARC)

In 2022, the United States was 100% dependent on imports for 10 critical mineral commodities (e.g., arsenic, asbestos, cesium, graphite) and was at least 50% dependent on imports for another 33 critical mineral commodities (e.g., peat, tin, cobalt, zinc, nickel, aluminum). The country needs sharper natural resource mapping to manage this risk—and the Geological Earth Mapping Experiment (GEMx) is here to deliver it.

Figure 11. *The NASA ER-2 with the GEMx payload taxiing before take-off in Colorado with the NASA chase car following close behind. Credit: Anthony Cornelius / Jet Centers of Colorado*

GEMx Flights and Instrumentation

GEMx is a joint multi-year campaign between NASA and the USGS to map portions of the United States at 15 m², collecting new information about Earth's critical minerals and atmosphere using advanced airborne imaging instruments:

- Airborne Visible/Infrared Imaging Spectrometer(s) (AVIRIS-C and AVIRIS-5)
- MODIS/ASTER Airborne Simulator (MASTER)

In 2026, GEMx flew over 50 science flight hours from its home base in Colorado Springs over Utah, New Mexico, Colorado, and Arizona (bringing the total to over 250 science flight hours and ~1,000,000 km² covered over multiple campaign years).

GEMx complements data from NASA instruments on the International Space Station (ISS), including the Earth Surface Mineral Dust Source Investigation (EMIT), which maps the mineral dust source composition of Earth's arid regions to better understand mineral dust's role in climate change, and ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS), which captures very detailed images of Earth's surface.

Figure 12. *EPIC Lab Engineer Alex Polakis servicing the MASTER instrument during GEMx post-flight activity. Credit: James Jacobsen / BAERI*

GEMx data can be found here: https://ideas-digitaltwin.jpl.nasa.gov/mmgis/?mission=GEMx, and the GEMx website can be found here: https://science.nasa.gov/mission/gemx/

This effort is funded through the USGS EMRI program: https://www.usgs.gov/special-topics/earth-mri

Figure 13. *ER-2 pilot Kirt Stallings exiting the cockpit after a successful GEMx 2026 mission sortie over New Mexico. Credit: James Jacobsen / BAERI*

NASA's C-20A Flights Advance Understanding of Earthquake Dynamics

Contributed by Jay Levine (NASA AFRC)

NASA's C-20A aircraft completed a series of flights on April 29, 2026 over Central California to improve the accuracy of the region's earthquake models and support NISAR (NASA-ISRO Synthetic Aperture Radar), the U.S.-India satellite mission launched in 2025 to track hazards, monitor ecosystems and crops, and measure changes in ice sheets and glaciers.

Figure 14*. NASA's C-20A takes off from NASA's Armstrong Flight Research Center in Edwards, California, on April 29. The aircraft carries the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR), used to study the San Andreas Fault in Central California and support validation of a hazard-monitoring satellite's radar. The flight series will also help scientists refine earthquake models. Credit: Jim Ross / NASA*

The flights — part of an ongoing campaign that began Sept. 30, 2025 — used airborne radar to measure ground movement along the San Andreas fault.

The C-20A, based at NASA's Armstrong Flight Research Center in Edwards, California, carried the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR), an instrument developed at NASA's Jet Propulsion Laboratory in Southern California. The UAVSAR flights were coordinated with NISAR's orbit. During the flights, UAVSAR recorded surface motion driven by crustal deformation on the San Andreas fault and mapped land subsidence in the Central Valley caused by groundwater withdrawal.
Data from UAVSAR can also help improve scientists' understanding of how Earth's atmosphere affects NISAR's measurements.

The recent UAVSAR flights were part of a six-month effort to calibrate NISAR's L-band radar and validate the instrument's measurements, which will cover nearly all the planet's land and ice surfaces twice every 12 days.

GV Acquisition, Modifications, and Schedule

Contributed by Derek Rutovic (NASA HQ)

NASA purchased a Gulfstream V (GV) aircraft in 2016 as a partnership between the Airborne Science and Human Research Programs. This unique relationship between mission directorates represented a shared calendar and cost model addressing airborne mission capability gaps for both, providing a true long-range aircraft for the Kazakhstan astronaut direct return mission as well as for Earth Science data collection to remote regions of the world. In CY19, this affiliation was fully realized as the GV flew a total of 633.6 flight hours — executing all Kazakhstan direct return missions and five separate Earth Science missions, including the final Operation Ice Bridge mission over Antarctica.

***Figure 15**. GV delivery to NASA. Credit: NASA*

Given the range of the GV and suitability for NASA airborne missions, demand for the single asset grew from both mission directorates. Following the maturation of the Commercial Crew Program and a post-pandemic resumption of flight activities, astronaut transportation requirements expanded in frequency, duration, and complexity, while science flight requests increased fourfold between 2020 and 2023. Earth Science relied increasingly on an aging Gulfstream-III (G-III) to partially address remote sensing requirements, flying 500+ flight hours in FY24.

In search of a long-term solution to address this demonstrated mission need, ASP purchased a GV, taking possession of the jet on the final day of FY25. This new asset will serve as a dedicated Earth Science aircraft while simultaneously modernizing the Earth Science's aircraft fleet as the G-III aircraft face retirement by the end of this decade.

Executing the GV procurement by the end of FY25 was no small feat and was completed a full 3 months ahead of schedule. The AFRC procurement office led the acquisition assisted by an evaluation team with representation from AFRC and ASP and utilizing experience from JSC personnel to ensure best value and mission alignment. The team worked long hours and communicated closely to enable delivery before the end of the fiscal year and the subsequent government shutdown. Once the government reopened, modifications to the aircraft to enable scientific data collection began.

This summer, Avenger Aerospace will begin installing the GV nadir portals and a team of engineers from ASP, JSC, and AFRC will complete the critical designs for the required modifications for power, data, and communications. The modifications to the new GV will mimic the existing aircraft, allowing instruments to be "dropped in" with no additional engineering. The team has implemented lessons learned to streamline the effort, minimizing the cost to implement and time to completion. These efforts will make the new GV mission-ready for its first scientific deployment to support LVIS GEDI data collection in Indonesia in Spring 2027.

NASA's B777 Airborne Research Laboratory: Advancements and Milestones

Contributed by Kirsten Boogaard (NASA LaRC)

NASA's effort to transform a Boeing 777 into a next-generation airborne science laboratory has reached a significant milestone: the aircraft has officially returned home! After undergoing heavy structural modifications in Waco, Texas, the B777 completed a successful check flight and transited back to NASA Langley Research Center on April 22, 2026.

Since January 2025, the aircraft has received extensive hardware and structural upgrades to prepare for science operations. L3Harris Technologies, in partnership with Yulista Solutions, LLC, completed major structural modifications on the fuselage, which included enlarging cabin windows and installing open portals along the belly of the aircraft to mount remote-sensing instruments. Inside the cabin, NASA and Huntington Ingalls Industries have been hard at work installing dedicated research stations and extensive wiring.

***Figure 16**. The freshly modified B777 will support next-generation Earth Science instruments. The platform will make its scientific debut in the upcoming NURTURE campaign. Credit: Ryan Hill / NASA*

This critical infrastructure will allow payload systems to communicate seamlessly with sensors, such as lidar and infrared imaging spectrometers, during flights.

As these interior modifications and structural upgrades wrap up in the coming months, the team remains focused on achieving Initial Operating Capability this fall. This major milestone will serve as the crucial bridge between the aircraft's physical transformation and its operational readiness. Once attained, the team will immediately pivot to the instrument and equipment upload phase to prepare for the aircraft's first science flights.

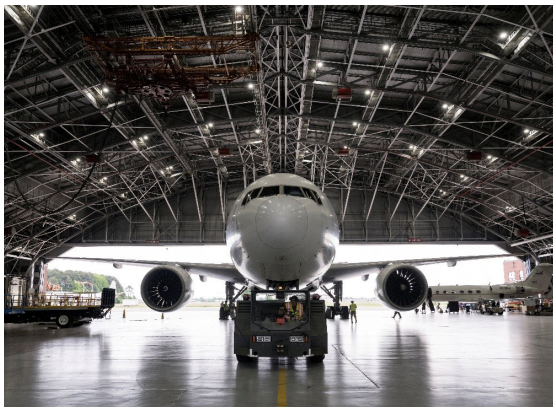

***Figure 17.** After nearly a year of modifications, the B777 aircraft arrived at NASA LaRC. Credit: Mark Knopp / NASA*

With the aircraft back at Langley, engineering work is also continuing on the B777's first science mission: the North American Upstream Feature-Resolving and Tropopause Uncertainty Reconnaissance Experiment (NURTURE). Slated for January 2027, NURTURE will advance knowledge of the processes that lead to extreme high-impact weather events during the winter, such as severe cold air outbreaks, windstorms and hazardous seas, snow and ice storms, sea ice breakup, and extreme precipitation. Engineering design and analysis for NURTURE payload installation have been progressing in parallel with the structural modifications.

We are thrilled to have the airplane back home at NASA and look forward to the road ahead as we integrate the first payloads later this year and prepare this flagship platform for its inaugural mission!

***Figure 18.** The B777 went through modifications to install new instrument portals, advanced wiring, and larger research windows. It is now the largest flying science laboratory in the world. Credit: Ryan Hill / NASA*

SOFRS Corner New Website Feature: CAS Vendor List

Contributed by Sommer Nicholas (NASA ARC)

The Airborne Science Program (ASP) website has recently been updated with a new feature. A comprehensive Commercial Aviation Services (CAS) Vendor List is now available on the Airborne Science Program (ASP) website. The CAS listing makes available commercial aircraft type, base location, as well as inspection and re-inspection dates listed by vendor and essentially provides investigators with a more streamlined experience of current pre-qualified providers. Further, this centralized list provides critical information on platforms to investigators during the early planning stages of their science missions. ASP users can expect the CAS list to be updated on a regular basis and may reference the latest revision date near the top right of the webpage.

Any airborne science experiment using NASA assets, personnel, facilities, instruments or funds, must have a safety review to be in compliance with NASA Procedural Requirement 7900.3D. The submittal of a Flight Request notifies the proper NASA Center aircraft operations groups of the experiment and therefore, the need for the required reviews.

The ESPO team constantly strives to improve the ASP website with features that allow investigators a seamless resource for flight planning. In recent months, the team has upgraded the entire website and began to focus on specific features such as the inclusion of the CAS vendor list. More good news to come!

Please do not hesitate to reach out to Mike Cropper, michael.c.cropper@nasa.gov, with any CAS vendor questions.

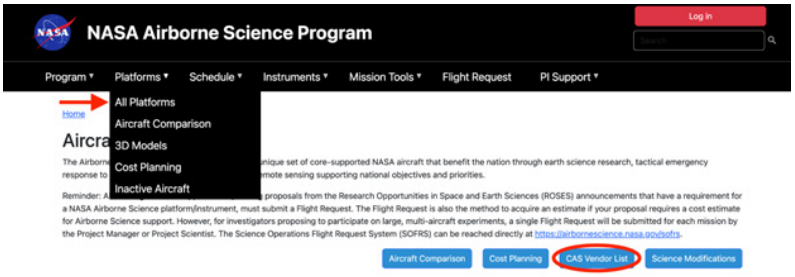

***Figure 19**. To access the CAS Vendor List, navigate to the NASA ASP website and select "Plaforms" followed by "All Platforms." From the resulting Aircraft List page, select "CAS Vendor List." Credit: Sommer Nicholas / NASA*

NASA Airborne Science Program 6-Month Schedule

Starting June 2026 (generated 5/19/26)

	FY2026				FY2027		
	Q3	Q4			Q1		
	Jun	Jul	Aug	Sep	Oct	Nov	De
ASP Supported							
ER-2 #806	WDTS Local Flight / GEMx	Proficiency Flights	Scheduled Maintenance		Proficiency F		
ER-2 #809	Proficiency Flights	INSPYRE U / INSPYRE P	INSPYRE Stateside Deployment	INSPY	Scheduled M		
C-20A	Student Airb	ASCENT Pla / Thrust Reve		Arctic-Boreal	NISAR Cal/Val SE USA F		
G-III (LaRC)	SARP26	G-III Maintenance	G-III FIRESENSE				
G-IV (AFRC)	Heavy Mx/Modification	FCF & Structural Mo	Mission Systems Mod				
GV (AFRC)	Modifications		Aircraft Modifications at Mod Facility				
B777 #577	Undergoing Modifications				NURTURE Upload		
P-3	P-3 Aircraft Unavailable						
WB-57 #926	Image	NOAA SABRE					
WB-57 #928	Major Inspection On Indefinite Hold						
WB-57 #927	Maintenance						
Other NASA							
B200 (L)			B200 FIRESENSE				
GV	SARP Missi	ASCE	74S Direct F			Crew 13 Launch /	

Legend
Unavailable
Foreign Deployment / Stateside Deployment / Flight / Reimbursable / Aircraft Configuration
Aircraft Modifications
Maintenance

Source: "Aircraft Calendar - Overview" at https://airbornescience.nasa.gov/aircraft_overview_cal

Calendar of Events

NSF NGF Earthscope Community Science Workshop
May 26, 28 & June 2, 4, 2026, Virtual
https://www.earthscope.org/event/2026-nsf-ngf-community-science-conference/

AGU Chapman on Updating Usable Projections on Future Sea Level
June 8-11, 2026, Montréal, Canada
https://www.agu.org/chapman-sea-level

World Biodiversity Forum
June 14-19, 2026, Davos, Switzerland
https://worldbiodiversityforum.org/

Cascadia Region Earthquake Science Center (CRESCENT) Workshop
June 25-26, 2026, Portland, OR
https://cascadiaquakes.org/2025/01/19/2026-partnerships-applications-workshop/

PANGEA Community Town Hall
July or August 2026 (TBD)

Farnborough Airshow
July 20-24, 2026, Farnborough, England, UK
https://www.farnboroughairshow.com/

EAA AirVenture OshKosh 2026
July 20-26, 2026, OshKosh, Wisconsin
https://www.eaa.org/airventure

Ecological Society of America (ESA) Annual Meeting 2026
July 26-31, 2026, Salt Lake City, UT
https://esa.org/saltlake2026/

12th SCAR Open Science Conference
August 8-19, 2026, Oslo, Norway
https://npolar.no/en/arrangement/scar2026/

2026 IEEE International Geoscience and Remote Sensing Symposium (IGARSS)
August 9-14, 2026, Washington, D.C.
https://2026.ieeeigarss.org/

BioSCape Workshop
August 16–23, 2026, Cape Town, South Africa

Strato-Ops Conference International
September 2-4, 2026, Miyazaki, Japan
https://stratoops2026.com/

Statewide California Earth Center (SCEC) 2026 Annual Meeting
September 2026, Palm Springs, CA
https://central.scec.org/workshops

The Geological Society of America (GSA) 2026 Joint Meeting
October 11-14, 2026, Denver, CO
https://connects.geosociety.org/

American Geophysical Union (AGU) Annual Meeting 2026
December 7-11, 2026, San Francisco, CA
https://www.agu.org/plan-for-a-meeting/agumeetings

7th Federal UxS Workshop
March 15-19, 2027, Mississippi State, MS
https://www.usgs.gov/centers/national-innovation-center/science/7th-federal-uxs-workshop

XIV Biology Symposium 2027
August 7-13, 2027, Park City, Utah
https://scar.org/scar-events/scar-biology-2027-date-to-be-confirmed

American Geophysical Union (AGU) Annual Meeting 2027
December 13-17, 2027, Washington, D.C.
https://www.agu.org/meetings

NASA Airborne Science Program
Platform Capabilities

Platform Name	NASA Center	Payload Accommodations	Duration (Hours)	Useful Payload (lbs)	Max Altitude (ft)	Airspeed (knots)	Range (Nmi)
ASP Supported Aircraft							
B777	LaRC	nadir ports, dropsondes, in situ sampling	18	75,000	43,000	500	9,000
ER-2 (2)	AFRC	Q-bay (2 nadir ports), nose (1 nadir port), wing pods (4 nadir, 3 zenith ports), centerline pod (1 nadir port)	12	2,900	>70,000	410	5,000
G-III/C-20A	AFRC	UAVSAR pod	7	2,610	45,000	460	3,000
G-III	LaRC	2 nadir ports, dropsonde / sonobuoy	7	2,610	45,000	460	3,000
G-IV	LaRC	AirSAR next gen (future)	7.5	5,610	45,000	459	5,130
P-3	WFF	1 large and 3 small zenith ports, 3 fuselage nadir ports, 4 P-3 window ports, 3 DC-8 window ports, nose radome, aft tailcone, 10 wing mounting points, dropsonde	14	14,700	32,000	400	3,800