



NASA Aeronautics

November 2023
No. 30

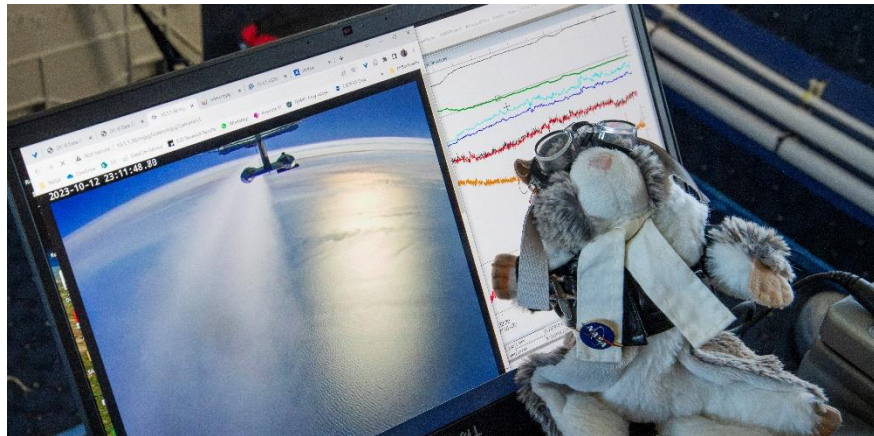
Monthly STEM Newsletter

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NEW Release! First
Woman Issue No.2

imaginAviation, NCAS,
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Orville D. Squirrel flew on NASA's DC-8 on October 24, 2023 to help study contrail particulates coming from the ecoDemonstrator aircraft. Credit: NASA

November 2023

Fall is here, Aeronauts! This month we celebrate the contributions and strengths of our Native American friends and family for National Native American Heritage Month. Join us this month and every month to celebrate our diverse communities. Did you enjoy NASA's 1st issue of the First Woman graphic novel? Well, check out the release of issue No. 2. It's not too late to apply for NASA internships, challenges, and other opportunities that have deadlines coming soon. Did you know the DC-8 is flying and doing research in the sky? Read on to find out how you can stay up to date with new flights and opportunities to engage with NASA Aeronautics.

Do you need to see more of something or have a new idea for upcoming newsletters? Let us know! Do you know someone else who needs this monthly update? [Sign up for our monthly STEM newsletter](#). Have questions or want to be removed from the list? Send an email to April at april.a.lanotte@nasa.gov or Holly at holly.o.gutierrez@nasa.gov.

Let's Fly!

National Native American Heritage Month

November

National Native American Heritage Month is observed every year during the month of November. In 1990, President George W. Bush signed a proclamation designating November 1-30 of each year National American Indian Heritage Month. Although the name has changed over the years, the dedication remains the same: honoring those that have cultivated and loved this land from the beginning of its time. Native American history is filled with many challenges, yet these people have made so many contributions in areas such as medicine, engineering, and to science.

[Learn about some of the NASA crew](#) that have made transformative innovations to further NASA's mission towards a better future. As we celebrate these powerful, resilient people, click [here](#) to learn more. Check your local library to find ways to celebrate in your community.

NEW Release! First Woman Issue No. 2

Hot off the presses!

The First Woman graphic novel Issue No. 2 is finally here! Meet Meshaya Billy, the newest crew member, a member of the Choctaw Nation, and decorated pilot that joins Callie and RT on their lunar mission. Download the First Woman app and interact with this graphic novel about diversity, equity, teamwork, and persistence. [Learn more about the First Woman graphic novel](#) available in English and Spanish. Get your digital copies of First Woman Issue No. 1 and No. 2, today!



Aeronautics Crew Highlight

Nicole Mann, *NASA Astronaut and Flight Engineer*



Nicole Aunaupu Mann became a NASA astronaut in 2013, and later, the flight engineer for Expedition 68 contributing to hundreds of experiments and technology demonstrations. She is the first indigenous woman to go to space and served as the commander for SpaceX Crew-5 mission that went to the International Space Station (ISS) from October 2022 to March 2023.

Nicole Mann is part of the Wailacki Tribe of the Round Valley Indian Tribes from Northern California. She served as a colonel in the U.S. Marine Corps and as a test pilot. Mann earned her bachelor's degree in mechanical engineering from the U.S. Naval Academy and a master's in mechanical engineering focusing on fluid mechanics from Stanford University. She always knew she wanted to be a Marine but didn't know what to do when she was there. During one summer, she was given an opportunity to fly in the backseat of an F-18, Nicole knew then and there she wanted to be a fighter pilot.

In addition to being the first indigenous woman in space, Mann was also the first woman to command a Crew Dragon. For people still figuring it out, Nicole Mann has some advice for you, "Identify what your passion is in life, and then just go crush it." Great advice, Nicole.

Nicole Aunapu Mann, thank you for your dedication to the mission and for being a role model to young pilots, women everywhere, and the indigenous community! [Learn more about Nicole Mann](#) and *Happy Flying!*

Virtual Opportunities

Almost here! Celebrate the X-59 Roll-Out

Host or participate in a Virtual Watch Party! As the X-59 gets closer to its grand unveiling, we're working to put together plans to help you host a virtual watch party. Reach out to us and tell us if you're interested in hosting an X-59 virtual watch party at

aeroSTEM@onmicrosoft.nasa.gov.



Coming Soon! imaginAviation 2024

IMAGINAVIATION

Discover...Advance...Catalyze with imaginAviation **February 28th - March 2nd, 2024**. Presented by the NASA Transformative Aeronautics Concepts Program (TACP), imaginAviation is a free virtual event that gives the community an opportunity to experience the latest innovations from NASA Aeronautics. This three-day event brings a community of bright minds and pioneers focusing on the future of aviation together to provide a glimpse into the work of NASA Aeronautics and our mission to building a better future. Watch last year's showcase [On Demand here](#) and stay tuned as we get closer to imaginAviation 2024!

Internship Opportunities

There's still time! Don't miss your chance to [apply for a NASA internship](#) for the Summer 2024 session. The first round of applications are in, but there is still time to apply. Projects for STEM and non-STEM majors at various NASA centers that offer in-person, virtual, and hybrid



Professional Development

NASA CONNECTS: Are you interested in other professional development opportunities? Create a new account or log into NASA's STEM Gateway to find a session that interests you.

Come See Us in Person!

AOPA Foundation High School Aviation Symposium

Sunday, Nov. 12th-14th, 2023: Join NASA and the Aircraft Owners and Pilots Association (AOPA) for their annual High School Aviation Symposium. This engagement brings educators from all around the country to share insights, ideas, and best practices for STEM programs focusing on aviation and aerospace. Register today, so you don't miss your chance to learn from experts in aviation and aerospace education.

Did you know?

November is National Diabetes Month. Diabetes occurs when blood glucose, or blood sugar is too high in the body. Diabetes can damage many important organs such as the eyes, heart, and kidneys, to name a few. Talk to your healthcare provider about taking charge of your health to prevent diabetes related problems.



November 5th is "fall back", so don't forget to turn your clocks back one hour before you go to bed to end daylight savings. In the spring, we'll "spring forward" and turn clocks forward one hour to begin daylight savings again.

November 8th is STEM/STEAM day. Educators use engaging, creative activities to teach students about science, technology, engineering, and math. Check out [NASA's Aeronautics STEM page](#) to find some fun, educational activities.

opportunities are still available. Get your application in by **February 2, 2024** and enjoy a summer working on real NASA projects alongside NASA experts.

Design Challenges and Grant Proposals

2024 Gateways to Blue Skies Challenge

As climate change increases the frequency and intensity of many natural disasters, NASA Aeronautics asks collegiate teams to conceptualize aviation-related system(s) that can be onboarded to improve aerial disaster management efforts immediately and into the next 10 years.



GREAT NEWS! The deadline to submit a non-binding Notice of Intent (NOI) has been EXTENDED to February 27, 2024, to [let us know you're interested in participating](#) in this year's Blue Skies Competition - and get regular communication updates from the Blue Skies Team!

NASA Community College Aerospace Scholars (NCAS)

NASA Community College Aerospace Scholars (NCAS) has three missions designed to challenge and build student's knowledge and skills. Mission 1: Discover [registration](#) is open **October 10 through December 11, 2023!** Students will collaborate to work on real NASA missions and goals. Commencing in February, Mission 1: Discover takes students through a 5-week, self-paced online course where they gain broad knowledge of NASA's mission directorates and discover NASA career paths. Students can expect to hear from subject matter experts and learn about NASA's missions dedicated to space exploration, technology, and aeronautics research.



November 13-17 is National Young Readers Week. Reading is the perfect way to introduce young ones to a vast variety of words and develop a joy for reading. NASA Aeronautics has [e-books](#) and [readers for any level](#) of reader. Check out NASA's library today and get reading!

November 20-26 is National Game & Puzzle week. Did you know NASA Aeronautics has aviation themed puzzles, games, and challenges? During this holiday week, use [Aeronautics @ Home](#) to find puzzles and other activities to challenge your friends and family.

In case you missed it...

NASA's DC-8 is on a research mission!

Our latest flight opportunity was on the DC-8 on October 24th. The DC-8 is NASA's airborne science laboratory. Based out of NASA's Armstrong Flight Research Center in Palmdale, CA, the DC-8 is collecting data about Earth's surface, its atmosphere, and testing new technologies. NASA's flying research laboratory is key to studying the effects of Sustainable Aviation Fuels (SAFs) on condensation trails, or commonly known as contrails. Stay tuned for updates, and [learn more](#) about the Douglas DC-8 jetliner and its job as a flying laboratory.

Don't miss another flight! We have new flights being added all the time, including the rollout of the X-59, and before we know it, we'll be flying on its first flight!! Add your email to our [contact list](#) to stay up to date on upcoming flights and other opportunities. The newest update is now live, allowing for more interaction, additional STEM content, and new opportunities to engage with us. It's a great time to come fly with us!



Engineering design challenges are hosted at a partner institution or a NASA field center. NCAS alumni are also eligible for NASA internship opportunities.

For more information, eligibility, and the application process join an information session or visit the [NCAS website](#).



University Student Research Challenge



The [newest solicitation window](#) is now open! Join the NASA University Student Research Challenge family and collaborate with peers to contribute to the evolving field of aeronautics! NASA is seeking creative ideas and concepts relevant to NASA Aeronautics from interdisciplinary student teams.

- Receive up to \$80,000 to pursue your ideas
- Gain technical and entrepreneurial experience
- Open to all majors and interdisciplinary teams (engineering, business, etc.)
- Interface with NASA experts and receive exposure to the aerospace industry

Proposals for the next round are due **November 9, 2023**.

Links to our Aeronautics STEM Resources:

[Aeronautics Research Resources](#): (all ages) This link takes you to a wide variety of educator resources, Aeronautics@Home, ebooks, National Academies Reports, webinars, lithographs and mini posters, the NASA Aeronautics Research Institute, and more.

[Aeronautics@Home](#): (K-12) This web page contains aeronautics-based activities, videos, games, and more that can be completed at home, in the classroom, or in any number of settings. Topic areas include: "Build It!" "Explore It!" "Watch It!" "Solve It!" "Color It!" and "Aero Educator Resources". Coming soon: "Read It!" and "Do It!"

[Aeronautics Innovations Challenges](#): Keeping up with our many design challenges and opportunities for both post-secondary and K-12 can be tough. In response, we created a "one-stop shop" to pull them all together in one location.

[Flight Log Experience](#): (K-12, post-secondary, general public) Sign up to send your name with NASA Aeronautics on X-planes, UAS flights, and more as you build your virtual NASA flight log. Earn virtual endorsement stamps and mission patches and access aeronautics STEM activities and resources. Educators can sign up their entire class.

[NASA Express Sign-Up](#): (K-12, post-secondary) Have you signed up for NASA's NASA EXPRESS weekly newsletter? This newsletter contains the latest information for educators (K-12 and post-secondary) about new resources, design challenges, internships, and workshops. It is THE go-to for the latest STEM news.

[Aeronaut-X](#): (K-12) Our Next Gen STEM: Aeronaut-X team provides new and exciting STEM activities that focus on cutting-edge aeronautics education and the future of flight.

[Museum and Informal Education Alliance](#): (Informal Educators and Museums) Not in a classroom? Looking for informal education materials? Join NASA's Museum and Informal Education Alliance, where you have access to NASA resources—including aeronautics—for your program, organization, museum, science center, or library. Find out about events happening near you and in the virtual world, and let the MIE Alliance help you build your programs! Access to guest speakers, the latest announcements about grant programs, and an active community network allow you to connect with other like-minded people in a supportive, engaging, and aerospace-focused neighborhood.

[NASA Aeronautics for Educators Facebook Page](#): (K-12, post-secondary) Join our NASA Aeronautics for Educators Facebook page, where the latest aeronautics updates, professional development opportunities, lessons and ideas are freely shared.

[NASA Connects](#): (K-12, post-secondary) NASA Connects is a network of educators who come together to collaborate, share NASA resources, and create personal collections of materials that can then be shared with others. Members can join groups tailored to their specific interests.

National Aeronautics and Space Administration

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