



X-PRESS

ARMSTRONG FLIGHT RESEARCH CENTER

Edwards, California, January 2026



NASA Armstrong Advances Flight Research and Innovation in 2025

NASA public affairs specialist Matt Kamlet sits inside the air taxi passenger ride quality simulator at NASA's Armstrong Flight Research Center in Edwards, California, as the simulator moves during a study on Dec. 15, 2025. Research continues to better understand how humans may interact with these new types of aircraft. In 2025, NASA Armstrong teams continued advancing key projects, supporting partners, and generating data that contribute to the agency's broader mission.

NASA/Christopher LC Clark



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New NASA Sensor Hunts for Critical Minerals



NASA/Christopher LC Clark

Cradled in the nose of an ER-2 high-altitude research airplane based at NASA's Armstrong Flight Research Center in Edwards California, a new sensor from NASA's Jet Propulsion Laboratory in Southern California has taken to the skies to help geoscientists map rocks hosting lithium and other critical minerals on Earth's surface some 60,000 feet below. In collaboration with the U.S. Geological Survey, the flights are part of the largest airborne campaign of its kind in the country's history.

But that's just one of many tasks that are on the horizon for AVIRIS-5, short for Airborne Visible/Infrared Imaging Spectrometer-5, which has a lot in common with sensors used to explore other planets.

NASA X-53 Revisits Wrights' Control Technique



NASA/Jim Ross

What do the Wright brothers and a modern fighter jet have in common? NASA explored that connection with the X-53 Active Aeroelastic Wing project, a flexible wing design inspired by the Wrights' original wing-warping technique.

On Dec. 17, 1903, Wilber and Orville Wright made history at Kitty Hawk, North Carolina, with the first successful powered flight. Nearly 100 years later, NASA Armstrong honored their legacy with the X-53, a modified F/A-18 that used aerodynamic forces to twist its wings, bringing the Wrights' concept into the modern age. The X-53 first flew on Nov. 15, 2002, just months before the 100-year anniversary of the Wrights' achievement.



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