National Aeronautics and Space Administration

NASAfacts

Armstrong Flight Research Center

NASA and Lockheed Martin publicly unveil the X-59 quiet supersonic research aircraft at a ceremony in Lockheed Martin's Skunk Works facility in Palmdale, California. The X-59 is the centerpiece of NASA's Quesst mission, which seeks to solve one of the major barriers to supersonic flight over land, currently banned in the United States, by making sonic booms quieter. NASA/Steve Freeman

Armstrong Flight Research Center is NASA's primary center for high-risk, atmospheric flight research and test projects. The center demonstrates America's leadership in aeronautics, Earth and space science, and aerospace technology as NASA Armstrong seeks to revolutionize aviation, add to mankind's knowledge of the universe, and contribute to the understanding and protection of Earth.

Named in honor of Neil A. Armstrong, a former research test pilot at the center and the first man to step on the moon, NASA Armstrong is in Edwards, California, in the western Mojave Desert. The center is uniquely situated to take advantage of year-round flying weather and 301,000 acres of remote area with varied topography to advance technology and science through flight.

Like Neil Armstrong, it is our people who put the spotlight on NASA Armstrong as a leader among industry partnerships to explore, innovate, and inspire for the benefit of all.

For almost 80 years, researchers at NASA Armstrong have led to major advancements and breakthroughs in the design and capabilities of many state-of-the-art civil and military aircraft. The center has the facilities and requisite workforce expertise to conceive,

design, analyze, fabricate, integrate, maintain, and conduct disciplinary research, flight research, and flight test on modified or unique research vehicles and systems. NASA Armstrong's strength is in integration of complex developmental systems.

The center's history dates to late 1946, when 13 engineers and technicians from the National Advisory Committee for Aeronautics Langley Memorial Aeronautical Laboratory came to Muroc Army Air Base (now Edwards Air Force Base) in Southern California's high desert to prepare for the first supersonic research flights by the X-1 rocket plane.

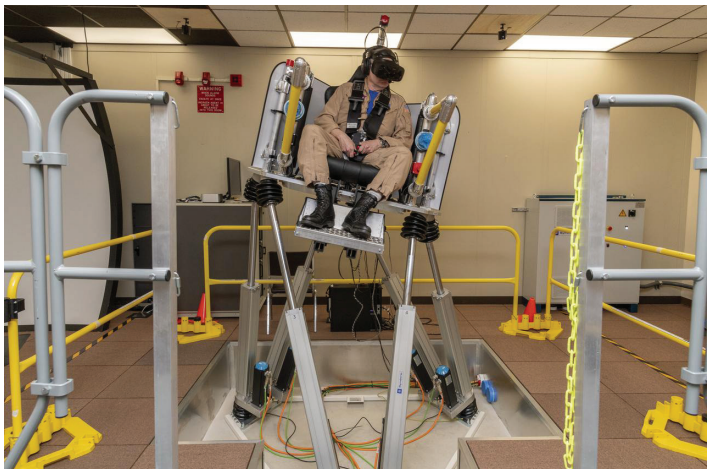
Since then, the center has been associated with many important technological milestones in aviation and space access – supersonic and hypersonic flight, digital fly-by-wire control systems, supercritical and forward-swept wings, and the space shuttles. The center was also where the Apollo program's Lunar Landing Research Vehicle, the famed X-15 rocket plane, and the wingless lifting bodies were tested during the 1960s and '70s.

Along with research and support aircraft, NASA Armstrong's capabilities include flight simulation, ability to validate high temperature and flight loads, flight test instrumentation, processing flight research data, and expertise in remotely operated aircraft flight research. Armstrong's system of facilities consists of the Consolidated Information Technology Center, the Experimental Fabrication Shop, the Flight Loads Laboratory, and the Research Aircraft Integration Facility. In addition, the Dryden Aeronautical Test Range has for decades provided backup communications for the International Space Station and the spacecraft that bring U.S. astronauts to and takes them from the space station.

The Research Aircraft Integration Facility can simultaneously check aircraft flight controls, avionics, electronics, and other systems. The only one of its type in NASA, the facility speeds up and enhances systems integration and preflight checks on research aircraft.

All NASA Armstrong capabilities and facilities enable the center's most important capability: the workforce. The center employs more than 1,000 government and contractor personnel at its two campuses. It's the in-house knowledge – research and engineering; aircraft modification, maintenance, and operations; project and institutional management, etc. – that drives the airworthiness and flight safety decisions to execute NASA's mission.

NASA Armstrong employs more than 1,000 government and contractor personnel at Edwards, California. NASA



Several projects supporting NASA's Advanced Air Mobility mission are researching how to make routine flight of air taxis and drones a reality. NASA Armstrong also built a new simulator to study air taxi passenger comfort. NASA/Steve Freeman

NASA Armstrong's ER-2 high-altitude Earth science aircraft flies. NASA

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