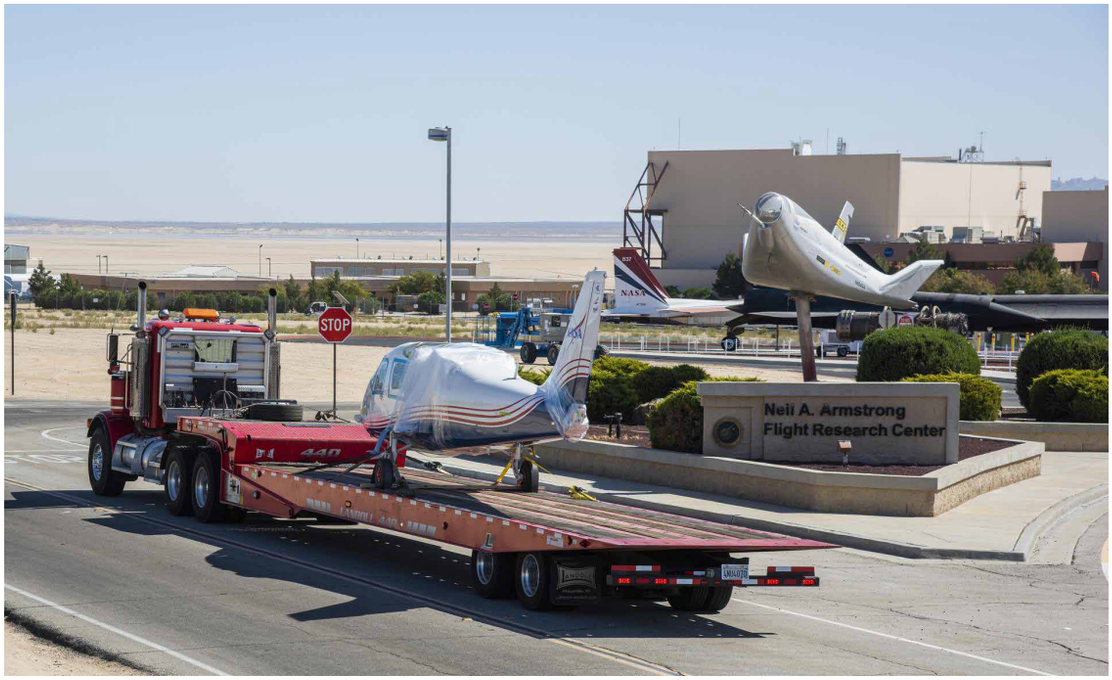
National Aeronautics and Space Administration

NASAfacts

Armstrong Flight Research Center



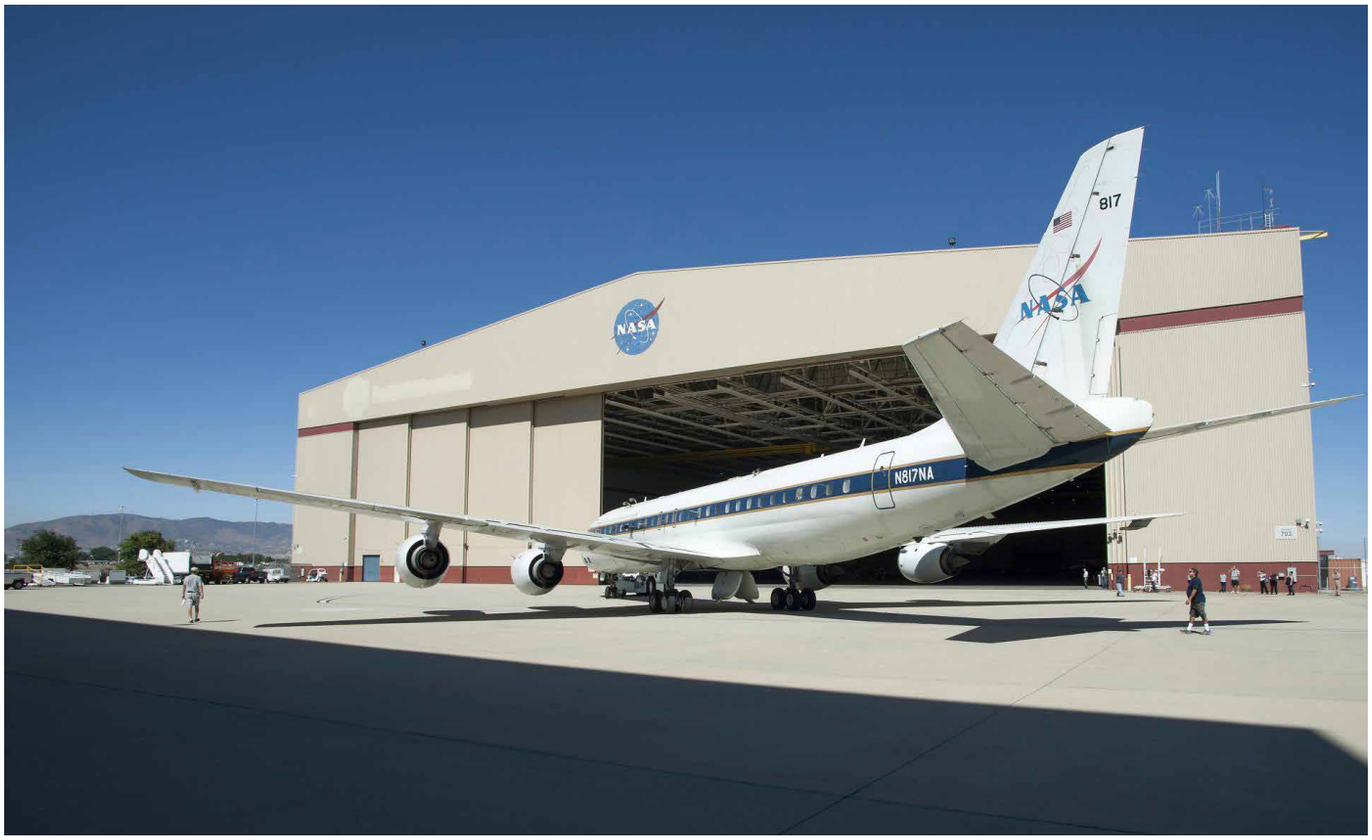
NASA's all-electric X-57 Maxwell, in its Mod II configuration, arrives at NASA's Armstrong Flight Research Center in Edwards, California. The X-plane was delivered by prime contractor Empirical Systems Aerospace of San Luis Obispo, California, in two parts, with the wing separated from the fuselage, to aid in a more timely delivery. X-57 is NASA's first crewed X-plane in two decades, and seeks to further advance the design and airworthiness process for distributed electric propulsion technology for general aviation aircraft. (NASA)

Armstrong Flight Research Center is NASA's primary center for high-risk, atmospheric flight research and test projects. The center has the facilities and requisite 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.

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 located 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.

For 75 years, research at NASA Armstrong has led to major advancements and breakthroughs in the design and capabilities of many state-of-the-art civil and military aircraft. 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.

NASA Armstrong's history dates back to late 1946, when 13 engineers and technicians from the NACA's 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.



Media observe as ground crews tow NASA's DC-8 airborne laboratory into its Palmdale, California hangar. (NASA)

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.

In addition to the main campus at Edwards, NASA Armstrong bases several Earth science aircraft and the Stratospheric Observatory for Infrared Astronomy (SOFIA) at our satellite facility, Building 703 in Palmdale, California.

Along with research and support aircraft, 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, Experimental Fabrication and Repair, 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 Russian Soyuz spacecraft that brings 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.

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

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