

Uploaded Date	Channel	Video URL	Video Title	Description	
2023 06 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/trc9RD7XZmU">https://youtu.be/trc9RD7XZmU</a>	NASA Celebrates Pride Month at LA Parade 2023	<p>NASA's Armstrong Flight Research Center in Edwards, California and NASA's Jet Propulsion Laboratory in Pasadena, California marched in the LA Pride Parade in June 2023. This was NASA Armstrong's first time participating in the parade, and many NASA employees attended to celebrate LGBTQIA+ community and allyship.</p> <p>NASA's team included engineers, scientists, technicians, and mission support folks who enrich the organization by showing up as themselves. On Earth and at NASA, there is space for everyone.</p> <p>Learn more about NASA's Armstrong Flight Research Center.  <a href="https://www.nasa.gov/centers/armstrong/home/index.html">https://www.nasa.gov/centers/armstrong/home/index.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2023 06 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/hnb6POvOPc">https://youtu.be/hnb6POvOPc</a>	NASA F-18 Gets New Paint	<p>NASA's F/A-18D entered the U.S. Air Force Corrosion Control Facility on Edwards Air Force Base, California, also known as the Paint Barn, in March 2023. Once complete, the aircraft was returned to its homebase at NASA's Armstrong Flight Research Center in Edwards, California.</p> <p>The aircraft is intended to track, or "chase," the quiet supersonic X-59 aircraft and provide a platform for videographers and photographers to document research and tests.</p> <p>See the link for more information, and a gallery of the aircraft in the Paint Barn.  <a href="https://www.nasa.gov/feature/nasa-s-chase-aircraft-gets-a-facelift">https://www.nasa.gov/feature/nasa-s-chase-aircraft-gets-a-facelift</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2023 05 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pcVwqQZsNAs">https://youtu.be/pcVwqQZsNAs</a>	NASA Armstrong Supports Robotics Competition	<p>Helping develop the next generation of engineers and technicians, volunteers from NASA's Armstrong Flight Research Center in Edwards, California, assisted students competing in the Aerospace Valley Regional Robotics Competition.</p> <p>NASA Armstrong sponsored several Antelope Valley teams during the event March 30 through April 1, and employee volunteers served as mentors and judges, and the mobile fabrication shop helped with team repairs.</p> <p>For more information: <a href="https://www.nasa.gov/feature/nasa-armstrong-supports-robotics-competition">https://www.nasa.gov/feature/nasa-armstrong-supports-robotics-competition</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2023 03 30	NASA Armstrong Flight Research Center	<a href="https://youtu.be/YfYAA MB4guA">https://youtu.be/YfYAA MB4guA</a>	NASA Armstrong takes Weather Instrumentation to New Heights	<p>Researchers at NASA's Armstrong Flight Research Center in Edwards, California, developed an innovative atmospheric sensor suite, which can monitor air quality, help uncrewed aircraft avoid dangerous wind shears, and aid noise studies.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2023 03 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/JiKlzVH5bc">https://youtu.be/JiKlzVH5bc</a>	Utilizing NASA's B200 King Air to Study Snowmelt Levels	More than 1 billion people rely on seasonal mountain snowmelt as a resource for their water supply and a team of NASA scientists and aircraft operators are measuring snow levels to better understand the contribution to our water resources.	<a href="#">Transcript Link</a>
				In a series of two deployments in early February and March, pilots from NASA Armstrong Flight Research Center in Edwards Calif., flew the B200 King Air that was retrofitted with a specially designed radar developed by scientists at NASA's Jet Propulsion Laboratory in Pasadena Calif., to study new methods in measuring the snow levels.	
				The Signals of Opportunity Synthetic Aperture Radar (SoOpSAR) collects detailed data on the snow that melts from the mountainous region by utilizing radio signals in the environment to communicate information about the snow to scientists and how it contributes to the water supply.	
				Learn more: <a href="https://www.nasa.gov/feature/utilizing-nasa-s-b200-king-air-to-study-snowmelt-levels">https://www.nasa.gov/feature/utilizing-nasa-s-b200-king-air-to-study-snowmelt-levels</a>	
2023 03 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ObEQjiVEOyU">https://youtu.be/ObEQjiVEOyU</a>	NASA Armstrong Positive Pressure Breathing Training	In preparations for future X-59 flight tests, aircrews from NASA Armstrong Flight Research Center and Lockheed Martin recently underwent pressure breathing training at KBR's San Antonio, Texas facility. Anthony Wurmstein, KBR operations manager and senior aerospace physiologist, explains how pressure breathing training is conducted and how it can be valuable in emergency situations.	<a href="#">Transcript Link</a>
2023 03 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zAoNkcZTsK8">https://youtu.be/zAoNkcZTsK8</a>	Studying Snowstorms with NASA's ER-2 Aircraft	The ER-2 high-altitude aircraft, based at NASA's Armstrong Flight Research Center Building 703 in Palmdale, California, supported the study of snowstorms for NASA's Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Storms (IMPACTS) mission.	<a href="#">Transcript Link</a>
				The aircraft temporarily deployed to Dobbins Air Reserve Base in Marietta, Georgia, and flew over the Midwest and Eastern United States to gather data about snowstorms and the conditions in which they form. Equipped with a suite of scientific instruments, the ER-2 flies at altitudes of about 65,000 feet to get a top-down view of the clouds to measure the properties of storms.	
				Data collected during the final deployment of this three-year campaign, along with NASA's P-3 based at the Wallops Flight Facility in Wallops Island, Virginia, will allow scientists to learn more about snowstorms and will improve meteorological models and the ability to use satellite data to predict how much snow will fall and where.	

2023 02 08 NASA  
Armstrong  
Flight  
Research  
Center

[https://youtu.be/nVj\\_1Tn8HrQ](https://youtu.be/nVj_1Tn8HrQ) 75 Years of  
Armstrong  
Tracking

NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.

[Transcript Link](#)

For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is Tracking.

Stay updated with NASA Armstrong's 75th anniversary celebrations:

<https://www.nasa.gov/centers/armstrong/about/75years/index.html>

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2023 01 18 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/ZBmBJDFSHUU> 75 Years of  
Armstrong  
Simulators

NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.

[Transcript Link](#)

For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is Simulators.

Stay updated with NASA Armstrong's 75th anniversary celebrations:

<https://www.nasa.gov/centers/armstrong/about/75years/index.html>

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Additional Sources Include:

"Test Flights, Beyond the Limits, Episode 3: The New Frontier" (1999), Vision Films, Inc. Lise Romanoff, Stephen Rocha

The Shape of Things to Come" (1984), Northrop Grumman Corporation

2022 12 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/DxvBVAlwvQ4">https://youtu.be/DxvBVAlwvQ4</a>	NASA's Armstrong Flight Research Center 2022 Highlights	NASA's Armstrong Flight Research Center in Edwards, California, explores the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery.	<a href="#">Transcript Link</a>
				To learn more about some of the NASA Armstrong missions featured in this video, take a deep dive into these links:	
				<p>Advanced Air Mobility: <a href="https://www.nasa.gov/aam">https://www.nasa.gov/aam</a></p> <p>Armstrong Artemis Contributions: <a href="https://www.nasa.gov/feature/nasa-armstrong-works-to-support-orion-and-artemis">https://www.nasa.gov/feature/nasa-armstrong-works-to-support-orion-and-artemis</a></p> <p>Armstrong Celebrates 75 Years: <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a></p> <p>Armstrong Research, Technology, and Engineering Report: <a href="https://www.nasa.gov/sites/default/files/atoms/files/2021-afrc-rte-report.pdf">https://www.nasa.gov/sites/default/files/atoms/files/2021-afrc-rte-report.pdf</a></p> <p>Armstrong STEM Engagement: <a href="https://www.nasa.gov/centers/armstrong/education/index.html">https://www.nasa.gov/centers/armstrong/education/index.html</a></p> <p>C-20A Science Aircraft: <a href="https://www.nasa.gov/centers/armstrong/aircraft/C-20A/index.html">https://www.nasa.gov/centers/armstrong/aircraft/C-20A/index.html</a></p> <p>Convergent Aeronautics Solutions: <a href="https://www.nasa.gov/aeroresearch/programs/tacp/cas">https://www.nasa.gov/aeroresearch/programs/tacp/cas</a></p> <p>DC-8 Science Aircraft: <a href="https://www.nasa.gov/centers/armstrong/aircraft/DC-8/index.html">https://www.nasa.gov/centers/armstrong/aircraft/DC-8/index.html</a></p> <p>ER-2 Science Aircraft: <a href="https://www.nasa.gov/centers/armstrong/aircraft/ER-2/index.html">https://www.nasa.gov/centers/armstrong/aircraft/ER-2/index.html</a></p>	
2022 12 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/feMlPg4lVCo">https://youtu.be/feMlPg4lVCo</a>	Magnetic Release Mechanism Succeeds in Flight	In aeronautics and space exploration, there is a need to connect and release components quickly and reliably. NASA's Armstrong Flight Research Center in Edwards, California, recently tested a new magnetic release mechanism that could have applications for aircraft, spacecraft, and space exploration.	<a href="#">Transcript Link</a>
				The research looks to replace some mechanical release mechanisms with magnetic ones. The experimental release mechanism potentially has fewer parts, requires less maintenance, and is more reliable.	
2022 12 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8l0lHgZX9qQ">https://youtu.be/8l0lHgZX9qQ</a>	Aging, Fading Signs Replaced at NASA Armstrong	Sizzling summer sunshine and year around blowing winds have weathered and faded gate, substation, and building signs, as well as the NASA logos on the facilities at NASA Armstrong. A project started in September to replace the nearly 300 signs, including some additional signs needed to better identify buildings.	<a href="#">Transcript Link</a>

2022 11 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xhCm2uq2kBM">https://youtu.be/xhCm2uq2kBM</a>	Jet Engine Installed on NASA's Quiet Supersonic X-59	<p>The engine that will power NASA's quiet supersonic X-59 in flight is installed, marking a major milestone in the experimental aircraft's journey toward first flight. The installation of the F414-GE-100 engine at Lockheed Martin's Skunk Works facility brings the vehicle close to the completion of its assembly, with NASA targeting flight in 2023. The engine packs 22,000 pounds of propulsion energy, and will power the X-59 in flight at speeds up to Mach 1.4, and altitudes up to 55,000 feet. The X-59 is designed to reduce the intensity of sonic booms, which occur when an aircraft flies at supersonic speeds, or, faster than the speed of sound.</p> <p>For more footage:  <a href="https://images.nasa.gov/details-AFRC-2022-13881-1-X59EngineInstallVideoFile">https://images.nasa.gov/details-AFRC-2022-13881-1-X59EngineInstallVideoFile</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2022 11 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/yCvNNTBKHRg">https://youtu.be/yCvNNTBKHRg</a>	75 Years of Armstrong Flight Loads	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is Flight Loads.</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a></p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2022 10 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/sSmQ86xyDrg">https://youtu.be/sSmQ86xyDrg</a>	NASA's X 57 Maxwell Powers Up	<p>NASA's X-57 Maxwell all electric aircraft has power! With the successful installation of two 400-pound lithium-ion battery packs in the cabin of the plane. The X-57 project is the agency's first all-experimental electric aircraft, and an early part of NASA's work to develop sustainable aviation solutions. Instead of aviation fuel, it will use commercial, rechargeable, lithium-ion batteries for the energy its motors need for flight. The X-57 project team repeatedly tested the batteries to ensure they can safely power the aircraft for an entire flight, and designed custom, lightweight cases to keep the batteries secure.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2022 09 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RrkH0jfx-4Y">https://youtu.be/RrkH0jfx-4Y</a>	Shuttle Endeavour's Last Flight Was 10 Years Ago	People from communities all over California watched the skies in hopes of catching a glimpse of space shuttle Endeavour as it was ferried on the NASA 747 Shuttle Carrier Aircraft to Los Angeles on Sept. 21, 2012.	<a href="#">Transcript Link</a>
				On its final flight to the California Science Center, Endeavour was escorted by a combination of F/A-18s and an F-15 from NASA's Armstrong Flight Research Center in Edwards, California. Those aircraft were flown by NASA Armstrong pilots, while center photographers and videographers documented the orbiter's final journey.	
				Included on the space shuttle's flight path were many California landmarks such as the California State Capitol Building, Disneyland, Dodger Stadium, the Getty Center, the Golden Gate Bridge, and the Hollywood sign. Also on the route were the Los Angeles Memorial Coliseum, NASA's Ames Research Center, NASA's Jet Propulsion Laboratory in Pasadena, and the Santa Monica Pier.	
				For more on the Endeavour anniversary go to: <a href="https://www.nasa.gov/feature/on-shuttle-endeavour-s-anniversary-nasa-armstrong-looks-ahead-0">https://www.nasa.gov/feature/on-shuttle-endeavour-s-anniversary-nasa-armstrong-looks-ahead-0</a>	
2022 09 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2e0LbR_XtFk">https://youtu.be/2e0LbR_XtFk</a>	75 Years of Armstrong Airborne Science	NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.	<a href="#">Transcript Link</a>
				For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is Airborne Science!	
				Stay updated with NASA Armstrong's 75th anniversary celebrations:	
				<a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>	
				Follow us @NASAArmstrong on Twitter, Facebook & Instagram.	
				The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.	
2022 08 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XkH97RnTixc">https://youtu.be/XkH97RnTixc</a>	2022 NASA TECHRISE Student Challenge	The NASA TechRise Student Challenge invites student teams to develop, build, and launch science and technology experiments on high-altitude balloons. Students in grades six to 12 attending U.S. public, private, or charter schools – including those in U.S. territories – are challenged to team up with their schoolmates to design an experiment under the guidance of an educator. The NASA TechRise Student Challenge offers hands-on insight into the design and test process used by NASA-supported researchers. It aims to inspire a deeper understanding of Earth's atmosphere, surface features, and climate, as well as space exploration, coding, electronics, and the value of test data. To learn more visit: <a href="https://www.nasa.gov/techrise-student-challenge">https://www.nasa.gov/techrise-student-challenge</a>	<a href="#">Transcript Link</a>

2022 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/x5wsR9Zz8kQ">https://youtu.be/x5wsR9Zz8kQ</a>	NASA High Ice Water Content Campaign Radar Development Update	NASA's High Ice Water Content Campaign (HIWC) utilizes the DC-8 to study high altitude ice crystals that may cause engine icing conditions. High ice water content can be found within large convective storms and can result in aircraft engines losing power or not functioning properly. An update to the radar development is shared by the researchers of this campaign.	<a href="#">Transcript Link</a>
2022 08 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cIRSrW2rNT4">https://youtu.be/cIRSrW2rNT4</a>	2022 FIRST Robotics Competition RAPID REACT	NASA Armstrong Flight Research Center took part in the annual For Inspiration and Recognition of Science and Technology (FIRST) Aerospace Valley Regional Robotics Competition at Eastside High School in Lancaster, California. The event had over 120 volunteers, most of which were from the local aerospace community that include NASA Armstrong, Lockheed Martin, Northrup Grumman, and the US Air Force.  Hundreds of high school students competed in the 2022 season challenge, "Rapid React" presented by Boeing. Robots must collect large rubber balls, or "cargo," and deposit them into the upper and lower bins in the center of the playing field, or "tarmac." At the end of the game, the robots rush to "hangars" and traverse overhead rungs, like a playground monkey bars.  This year, NASA provided a mobile fabrication shop, specifically used for robotic events. Based at Armstrong Flight Research Center at Edwards Air Force Base, the shop is staffed by a NASA crew who manufactured or repaired parts for teams on the spot. To learn more about the mobile fabrication shop visit:  <a href="https://www.nasa.gov/centers/armstrong/features/nasa-armstrong-obtains-mobile-fab-shop.html">https://www.nasa.gov/centers/armstrong/features/nasa-armstrong-obtains-mobile-fab-shop.html</a>	<a href="#">Transcript Link</a>
2022 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Xz9FbsPW3_E">https://youtu.be/Xz9FbsPW3_E</a>	NASA Armstrong Supports F A-18E Vertical Tail Testing	NASA's Armstrong Flight Research Center in Edwards, California, conducted complex loads calibration tests on a F/A-18E aircraft from the Naval Air Systems Command (NAVAIR) in Patuxent River, Maryland. NAVAIR retired its previous loads test aircraft and NASA Armstrong staff are assisting to prepare the new aircraft for its role to help safely manage in flight maneuvers and determine how the F/A-18E fleet will perform if proposed upgrades are incorporated. This video shows the vertical tail loads calibration testing that concluded in May 2022. For more information: <a href="https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html">https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html</a>	<a href="#">Transcript Link</a>

2022 06 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/c1LQ7QJgpjM">https://youtu.be/c1LQ7QJgpjM</a>	75 Years of Armstrong Green Technology	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is Green Technology!</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>   </p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p> <p>Additional Sources Include:</p> <p>"Doing More With Much Less" (1994), AeroVironment, Inc.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2022 05 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mMffpG4bi4">https://youtu.be/mMffpG4bi4</a>	75 Years of Armstrong Space Flight	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is space flight!</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>   </p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p> <p>Additional Sources Include:</p> <p>"Spaceflight"- Episode 1: Thunder in the Skies" (1985), Dupont Corporation, Corporation for Public Broadcasting, Public Broadcasting Service</p> <p>"Spaceflight"- Episode 4: The Territory Ahead" (1985), Dupont Corporation, Corporation for Public Broadcasting, Public Broadcasting Service</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2022 05 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/82ol-rSz-Q">https://youtu.be/82ol-rSz-Q</a>	NASA Armstrong Supports F A-18E Wing Testing	NASA's Armstrong Flight Research Center in California conducted complex loads calibration tests on a F/A-18E aircraft from the Naval Air Systems Command (NAVAIR) in Patuxent River, Maryland.	<a href="#">Transcript</a> <a href="#">Link</a>
				NAVAIR retired its previous loads test aircraft and NASA Armstrong staff are assisting to prepare the new aircraft for its role to help safely manage in flight maneuvers and determine how the F/A-18E fleet will perform if proposed upgrades are incorporated.	
				This video shows the wing loads calibration testing that concluded in March 2022.	
				For more information: <a href="https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html">https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html</a>	
2022 05 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ptt53LRRLnM">https://youtu.be/Ptt53LRRLnM</a>	NASA Armstrong Supports F A-18E Horizontal Tail Testing	NASA's Armstrong Flight Research Center in California conducted complex loads calibration tests on a F/A-18E aircraft from the Naval Air Systems Command (NAVAIR) in Patuxent River, Maryland.	<a href="#">Transcript</a> <a href="#">Link</a>
				NAVAIR retired its previous loads test aircraft and NASA Armstrong staff are assisting to prepare the new aircraft for its role to help safely manage in flight maneuvers and determine how the F/A-18E fleet will perform if proposed upgrades are incorporated.	
				This video shows loads calibration testing on the horizontal tails that concluded in October 2021.	
				For more information: <a href="https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html">https://www.nasa.gov/centers/armstrong/features/complex-f18-tests.html</a>	
2022 04 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TlbqW Mmnn-E">https://youtu.be/TlbqW Mmnn-E</a>	NASA's X-59 Arrives Back in California Following Critical Ground Tests	The X-59, NASA's quiet supersonic experimental aircraft, has arrived back at Lockheed Martin's Skunk Works facility in Palmdale, California, following several months of critical ground tests in Ft. Worth, Texas.	<a href="#">0</a>

2022 03 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/56wymmsWdww">https://youtu.be/56wymmsWdww</a>	75 Years of Armstrong Autonomy	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is autonomy!</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a></p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p> <p>Additional Sources Include:</p> <p>"The Shape of Things to Come" (1984), Northrop Grumman Corporation</p> <p>"X-29: Experiment in the Sky" (1989), Smithsonian National Air &amp; Space Museum, Apogee Productions</p>	<a href="#">Transcript Link</a>
2022 02 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Wc-NZb2dgzg">https://youtu.be/Wc-NZb2dgzg</a>	Student Airborne Researchers fly on NASA's DC-8	<p>In December 2021, 53 students from various universities across the United States majoring in sciences, mathematics, and engineering were selected to fly on NASA Armstrong's DC-8 Airborne Science Laboratory, as part of the NASA Ames' Student Airborne Research Program (SARP).</p> <p>The DC-8 flew over California's Inland Empire, Imperial Valley and San Joaquin Valley to conduct research on air pollution with low-level flights beginning on Dec. 6, 2021. Participants flying on board were assisting scientists in the operation of instruments that measure air pollution and greenhouse gases to better understand their sources and how they react in the atmosphere.</p> <p>SARP is managed by NASA's Ames Research Center in California's Silicon Valley through the National Suborbital Research Center at the Bay Area Environmental Research Institute with funding and support from NASA's Earth Science Division. NASA's DC-8 is managed and maintained by NASA's Armstrong Flight Research Center.</p> <p>For more information:  <a href="https://www.nasa.gov/centers/armstrong/features/student-researchers-fly-on-dc8.html">https://www.nasa.gov/centers/armstrong/features/student-researchers-fly-on-dc8.html</a></p>	<a href="#">Transcript Link</a>

2022 01 27 NASA Armstrong Flight Research Center <https://youtu.be/4iOClWvnKVg> 75 Years of Armstrong Safety NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight. [Transcript Link](#)

For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is safety!

Stay updated with NASA Armstrong's 75th anniversary celebrations:  
[https://www.nasa.gov/centers/armstrong/about/75years/index.htm](https://www.nasa.gov/centers/armstrong/about/75years/index.html)  
|

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2022 01 03 NASA Armstrong Flight Research Center <https://youtu.be/clKMBgtx8R0> 75 Years of Armstrong Efficiency NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight. [Transcript Link](#)

For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is efficiency! Starting in the 1970's new advancements were made to make flying more economical and faster. Learn about the history of airplane advancement through flight.

Stay updated with NASA Armstrong's 75th anniversary celebrations:  
[https://www.nasa.gov/centers/armstrong/about/75years/index.htm](https://www.nasa.gov/centers/armstrong/about/75years/index.html)  
|

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Additional Sources Include:  
"Forward to Excellence: The Legacy of the X-Series" (1983), Northrop Grumman Corporation  
"The Shape of Things to Come" (1984), Northrop Grumman Corporation

2021 12 29 NASA Armstrong Flight Research Center <https://youtu.be/3vkT0v1xEts> NASA's Simulator for X-59 Quiet SuperSonic Technology Aircraft Receives Upgrade Training to fly a one-of-a-kind experimental aircraft like NASA's X-59 Quiet SuperSonic Technology requires a flight simulator that authentically replicates the real deal. Thanks to recent upgrades to the X-59's flight simulator at NASA's Armstrong Flight Research Center in Edwards, California, NASA test pilots are taking the flight training and preparation of this advanced X-plane to new heights. [Q](#)

The X-59 has a unique design that will reduce the loudness of a sonic boom, which occurs when an aircraft flies faster than the speed of sound, to a gentle, quiet sonic "thump". This design does not include a front windshield, and will instead utilize a forward-facing, multi-camera and display system called the eXternal Vision System (XVS) for the pilot to safely see. The design of the XVS, integrated into this X-59 simulator, is helping pilots prepare to fly the X-plane over select communities starting in 2024, demonstrating quiet supersonic flight to gather data on human responses to the quiet thump in place of the loud sonic boom.

This data could open the door to commercial supersonic flights over land in the near future.

2021 12 21 NASA Armstrong Flight Research Center <https://youtu.be/2vNzKxIDz4g> NASA's Armstrong Flight Research Center 2021 Through its research, NASA Armstrong demonstrates America's leadership in aeronautics, Earth and space science, and aerospace technology as the center seeks to revolutionize aviation, add to mankind's knowledge of the universe, and contribute to the understanding and protection of Earth. In 2021, NASA Armstrong continued to explore and develop technologies that reduce aircraft noise and fuel use, get you gate-to-gate safely and on time, and enable new aviation markets; support the agency's mission to bring together technology, science, and unique global earth observations; study the solar system at altitudes above the moisture in the atmosphere; and cultivate space technology partnerships to advance the goal of solving complex challenges needed to land, live, and explore the Moon and Mars. [Transcript Link](#)

2021 11 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gOa6cPpSfp4">https://youtu.be/gOa6cPpSfp4</a>	75 Years of Armstrong Maneuverability	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is maneuverability ! Learn about the history of airplane advancement through flight.</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>   </p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p> <p>Additional Sources Include:</p> <p>"Test Flights, Beyond the Limits, Episode 3: The New Frontier" (1999), Vision Films, Inc. Lise Romanoff, Stephen Rocha</p> <p>"HiMAT: The Future is Now", Rockwell International North American Aircraft Division (now Boeing)</p> <p>"The Shape of Things to Come" (1984), Northrop Grumman</p>	<a href="#">Transcript Link</a>
2021 10 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2mtjeLAKhAg">https://youtu.be/2mtjeLAKhAg</a>	75 years of Armstrong Control	<p>NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.</p> <p>For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is control! Learn about the history of airplane advancement through flight.</p> <p>Stay updated with NASA Armstrong's 75th anniversary celebrations:  <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>   </p> <p>Follow us @NASAArmstrong on Twitter, Facebook &amp; Instagram.</p> <p>The majority of archival footage and sound used in this video are in the public domain and can be found in government records, the Internet Archive, or Wikimedia Commons.</p>	<a href="#">Transcript Link</a>

2021 10 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/P9rtGatLgEU">https://youtu.be/P9rtGatLgEU</a>	National Hispanic Heritage Month with Alana & Elena	Hispanic Heritage Month pays tribute to the generations of Hispanic Americans who have positively influenced and enriched our nation and society. The month is recognized from September 15 through October 15.	<a href="#">Transcript</a> <a href="#">Link</a>
As we celebrate Latin Americans across the agency, we highlight Alana Roche' and Elena Johnson and learn more about their journey to NASA.					
Interviewed by Laura Peterson.					
All photos courtesy of Alana Roche & Elena Johnson.					
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2021 10 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/84USpCnB9iM">https://youtu.be/84USpCnB9iM</a>	Meet EVAA Autonomous Software to Help Save Aircraft	NASA's Resilient Autonomy team worked together with the Federal Aviation Administration (FAA) and the U.S. Department of Defense (DoD), to create new autonomous aircraft technology that will help reduce the number of aircraft crashes.	<a href="#">Transcript</a> <a href="#">Link</a>
This technology is called the Expandable Variable Autonomy Architecture, or EVAA, and it could help prevent accidents in retrofit general aviation aircraft and future autonomous aircraft. EVAA is based on an earlier NASA-developed technology that performs a similar function for military aircraft.					
2021 09 30	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nl79i39Ewpc">https://youtu.be/nl79i39Ewpc</a>	75 years of Armstrong Speed	NASA Armstrong's Flight research center is honoring 75 years of advancing technology and science through flight.	<a href="#">Transcript</a> <a href="#">Link</a>
For the next year there will be monthly reoccurring videos released to help tell the past 75 years of NASA Armstrong. This month's theme is speed! Learn about the history of the X-planes; from the X-1 to the upcoming X-59 & more!					
Stay updated with NASA Armstrong's 75th anniversary celebrations: <a href="https://www.nasa.gov/centers/armstrong/about/75years/index.html">https://www.nasa.gov/centers/armstrong/about/75years/index.html</a>					
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One clip did request attribution:					
"Air Force Special Film Project 416, 'Power of Decision', published 1958, uploaded to Internet Archive 2010 by U.S. Air Force Air Photographic and Charting Service, <a href="https://archive.org/details/AirForceSpecialFilmProject416powerOfDecision">https://archive.org/details/AirForceSpecialFilmProject416powerOfDecision</a>					

2021 09 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/HwDGJgUpjCk">https://youtu.be/HwDGJgUpjCk</a>	NASA and Joby Complete Air Taxi Testing	Members from NASA's Advanced Air Mobility National Campaign team and Revolutionary Vertical Lift Technology team were on site at Joby's facility located near Big Sur, California, for two weeks completing tests with Joby's prototype aircraft. With the tests complete, the team is analyzing the collected data.	<a href="#">Transcript Link</a>	
				As announced in a recent news release, NASA's goal is to collect vehicle performance and acoustic data for use in modeling and simulation of future airspace concepts. After the data is analyzed, the test results will also help identify gaps in current Federal Aviation Administration regulations and policies to help incorporate Advanced Air Mobility aircraft into the National Airspace System.		
				<a href="https://www.nasa.gov/press-release/nasa-begins-air-taxi-flight-testing-with-joby/">https://www.nasa.gov/press-release/nasa-begins-air-taxi-flight-testing-with-joby/</a>		
2021 08 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KGDjf5ynsj8">https://youtu.be/KGDjf5ynsj8</a>	NASA's ER-2 High Altitude aircraft prepared for DCOTSS mission	NASA's Armstrong Flight Research Center prepares for the Dynamics and Chemistry of the Summer Stratosphere, or DCOTSS, project. The project will directly study the convective impacts of thunderstorms over North America.	<a href="#">Transcript Link</a>	
2021 07 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XE8yQmrWjB8">https://youtu.be/XE8yQmrWjB8</a>	X-57 Concludes High-Voltage Testing	NASA's all-electric X- 57 Maxwell has completed another milestone toward first flight, the successful completion of high-voltage testing. A principal goal of the X-57 project is to share the X-57 design and airworthiness process with regulators and standards organizations. Another goal is to establish the X-57 as a reference platform for integrated approaches of distributed electric propulsion technologies. The next phase for the testing the X-57 will be verification and validation testing.	<a href="#">Transcript Link</a>	

2021 06 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mlZQeOlypNE">https://youtu.be/mlZQeOlypNE</a>	NASA TechRise Student Challenge Kick-Off Event	NASA has initiated a new competition for the 2021-22 school year, providing student teams a chance to design, build, and launch experiments on suborbital rockets and high-altitude balloon flights. On June 1, during the 8th annual ED Games Expo, NASA hosted its Kick-Off event for the challenge from 6 to 8 PM Eastern. More information is available at: <a href="https://www.futureengineers.org/nasatechrise">https://www.futureengineers.org/nasatechrise</a>	<a href="#">Transcript Link</a>
				<p>0:00 Deanne Bell Founder &amp; CEO  1:15 Bob Cabana Associate Administrator  3:57 TechRise Trailer  4:50 Jim Reuter, Associate Administrator for the Space Technology Mission Directorate  8:51 Deanne Bell - What is the TechRise Challenge  14:30 Hear from the Experts  14:35 Niki Werkheiser, Director of Technology Maturation  29:25 Rodney Grubbs, Program Manager, Marshall Space Flight Center  38:45 Alejandro Mundo, NASA CCRI Teacher/Associate Researcher  51:43 Dr. Swati Mohan, Guidance, Navigation, Control Systems Engineering Group Supervisor  1:06:12 Q&amp;A with NASA Experts  1:24:00 STEAM to Space Education Session  1:25:04 Christopher Baker, Program Executive, Flight Opportunities and Small Spacecraft Technology Programs  1:30:30 Tanya Silva, Director of K12 Engagement  1:33:10 Arnold Martin, Assistant Professor of Product Design and</p>	
2021 06 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/uotq6RIF-SY">https://youtu.be/uotq6RIF-SY</a>	Autonomous Software Saves Aircraft in NASA Simulator Footage	NASA's Resilient Autonomy activity is developing autonomous software for potential use in aircraft ranging from general aviation retrofit to future autonomous aircraft. This Joint Capability Technology Demonstration activity is in partnership with the Federal Aviation Administration and the Department of Defense.	<a href="#">Transcript Link</a>
				This simulator footage shows iGCAS, or improved GCAS, save a small aircraft from diving into a canyon, into the side of a mountain, or into the ground. The full version of the system the team is working on spans a wide range of autonomy and is called the Expandable Variable Autonomy Architecture (EVAA), which will eventually include more autonomous elements for increased safety on a range of aircraft.	
2021 05 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d0mtTul1Nn0">https://youtu.be/d0mtTul1Nn0</a>	NASA Tests System for Precise Aerial Positioning in Supersonic Flight	NASA recently flight tested a visual navigation system called the Airborne Location Integrating Geospatial Navigation System (ALIGNS). The system is designed to enhance precise aerial positioning between two aircraft in supersonic flight, and is being used by NASA to prepare for future acoustic validation flights of the agency's X-59 Quiet SuperSonic Technology airplane.	<a href="#">Q</a>
				Read more here <a href="https://www.nasa.gov/X59">https://www.nasa.gov/X59</a> .	

2021 05 13 NASA Armstrong Flight Research Center <https://youtu.be/TAb4yvQnRuA> Part II NASA's Advanced Air Mobility National Campaign Helicopter Tests During build two tests, a Bell OH-58C Kiowa helicopter, provided by Flight Research Inc. in Mojave, California, acted as a representative urban air mobility (UAM) vehicle. Test pilots evaluated several viable UAM flight profiles with the helicopter. The goal was to understand how a future UAM vehicle will need to operate in a congested urban environment.

Learn about part one here:

<https://www.youtube.com/watch?v=8LHAcY4yy08>

Image at 1:27 courtesy of Joby Aviation

2021 05 05 NASA Armstrong Flight Research Center <https://youtu.be/28TuUWnkKjU> NASA SIO Setting the Stage for Aviation's Future Over the past few years NASA has been testing and validating research associated with unmanned aircraft through a project called Unmanned Aircraft System Integration in the National Airspace System or UAS in the NAS project. This project spanned several years and addressed many of the early concerns of how unmanned aircraft would be integrated into our national airspace. After years of study the UAS in the NAS project has tackled many of the early concerns but one last big hurdle remains to successfully demonstrate how unmanned aircraft will work in harmony within the national airspace. With this in mind the final phase of testing is called the Systems Integration and Operationalization Demonstration activity or SIO. The goal of SIO is to work toward commercial UAS operations in the NAS. In order to accomplish that goal, NASA has partnered with American Aerospace Technology Incorporated (AATI), Bell, and General Atomics Aeronautical Systems (GA-ASI), Inc. to conduct flight demonstrations in the NAS that emulate commercial missions and begin working toward Federal Aviation Administration (FAA) type certification. On this episode of NASA X, we will take a look back at years of testing and development that have led up to the SIO demonstration flights. We'll meet the companies that are making these flights happen. [Transcript](#) [Link](#)

2021 03 25 NASA Armstrong Flight Research Center <https://youtu.be/mdShOB1691g> Women's History Month Laurie Grindle Women at NASA are making history every day by contributing to groundbreaking missions and projects in the areas of space, science and aeronautics. They're also dedicated to inspiring the next generation of explorers to break new boundaries. We're celebrating Women's History Month by recognizing their stories and contributions to exploration and beyond. [Transcript](#) [Link](#)

Laurie Grindle, Director for Programs & Projects at NASA Armstrong is interviewed by Alana Roche' to learn more about her and her journey to NASA.

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[www.nasa.gov/armstrong](http://www.nasa.gov/armstrong)

2021 03 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/F2wc8IuykEw">https://youtu.be/F2wc8IuykEw</a>	NASA's Final SIO Demo AATI's AiRanger Flight	Aerial inspections of gas and petroleum pipelines were simulated during NASA's final Systems Integration and Operationalization (SIO) demonstration flight with partner American Aerospace Technologies Inc.	<a href="#">Transcript Link</a>
				The SIO demonstration is in partnership with the Federal Aviation Administration (FAA) and three industry partners to show potential commercial applications using different sizes of unmanned aircraft systems (UAS) in a variety of locations and different airspace classes. SIO aims to accelerate the safe integration of UAS for commercial applications into the national airspace system.	
				AATI used this demonstration to represent how its AiRanger UAS could survey miles of petroleum pipeline using the installed InstaMap detection system to find faults or hazardous conditions in the pipes.	
				<a href="https://www.nasa.gov/centers/armstrong/features/gas-pipeline-inspections-simulated.html">https://www.nasa.gov/centers/armstrong/features/gas-pipeline-inspections-simulated.html</a>	
2021 03 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8LHAcY4yy08">https://youtu.be/8LHAcY4yy08</a>	NASA's Advanced Air Mobility National Campaign Helicopter Tests	The NC Integrated Dry Run tests, having completed their first phase Dec. 2-4, 2020, will continue with the next phase in March with a Bell OH-58C Kiowa helicopter, provided by Flight Research Inc. in Mojave, California, to act as a stand-in advanced air mobility vehicle.	<a href="#">Transcript Link</a>
				The FAA and Flight Research Inc. test pilots are flying different types of maneuvers with the helicopter at NASA's Armstrong Flight Research Center in Edwards, California, to help assess procedures and infrastructure while also developing a data baseline for future industry partnership flight testing.	
2020 12 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ao3cmkEGt6Q">https://youtu.be/ao3cmkEGt6Q</a>	NASA Armstrong Flight Research Center 2020	<a href="https://www.nasa.gov/centers/armstrong/home/index.html">https://www.nasa.gov/centers/armstrong/home/index.html</a>  <a href="#">Despite challenges with the global pandemic, NASA's Armstrong Flight Research Center at Edwards Air Force Base in California continued to support the agency in 2020 by safely advancing flight research in a mostly remote environment. Armstrong completed critical maintenance and flight training required to preserve its research mission. With innovative thinking and electronic meeting tools, a number of tasks were enabled. Among them, Armstrong answered the call to come up with innovative ideas to solve possible shortages of critical medical equipment; supported the agency's efforts to land the first woman and next man on the lunar surface; continued its Flight Opportunities mission to advance technologies that address NASA mission goals; reached critical milestones in the development of NASA's first crewed X-planes in more than 20 years; forged ahead with its research of unmanned aircraft; and helped NASA scientists make breakthrough discoveries in the cosmos with SOFIA.</a>	<a href="#">Transcript Link</a>

2020 12 08 NASA Armstrong Flight Research Center <https://youtu.be/jPw2RNKTtxM> NASA's Pilot Breathing Assessment Phase II Improving Flight One Breath at a Time <https://www.nasa.gov/centers/armstrong/features/pilot-breathing-assessment-program-completes-final-phase.html>

[The second and final phase of NASA's Pilot Breathing Assessment \(PBA\) program to analyze pilot breathing in high-performance fighter jet aircraft is now complete. Several milestones were added to phase two, which focused on refined methods to gather data from Navy and Air Force oxygen mask regulator systems and in testing cabin pressure in the F-18 A/B.](#)

[The program began with phase one in early 2018 at NASA's Armstrong Flight Research Center in California. Phase two started in fall 2019, and the program added an additional 50 flight hours. The research pilots primarily flew F-18 A/B aircraft to eliminate variables between jets, and the group refined data collection procedures, equipment and sensors.](#)

2020 10 05 NASA Armstrong Flight Research Center <https://youtu.be/lVzNdQOOyuA> Lander Simulation Testing Helps Advance NASA Navigation Technology How do you test lunar lander technology on Earth before going to the Moon? NASA uses commercial flight providers like Masten Space Systems vertical takeoff vertical landing rocket, Xodiac, to validate it during a recent flight in Mojave, California [Transcript Link](#)

The flight test simulates some of the maneuvers of a lunar lander. Designed for precision landing in a very tightly defined area, the Navigation Doppler Lidar technology transmits laser beams to the ground that bounce back to a sensor, providing information about the lander's velocity and distance to the ground. Unlike Earth where GPS satellites are used to navigate, NASA needs new technology to explore the Moon and other planets so a precision landing technology could open possibilities to land anywhere even near a crater. <https://www.nasa.gov/feature/lander-simulation-testing-helps-advance-nasa-navigation-spinoff>

NASA's Flight Opportunities program based at the agency's Armstrong Flight Research Center in Edwards, California, enables flight tests on commercial vehicles.

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2020 09 30 NASA Armstrong Flight Research Center <https://youtu.be/HFnmwXAba6g> NASA's Second SIO Demonstration Bell's APT 70 Takes Flight An urgent medical transport was simulated in NASA's second Systems Integration and Operationalization (SIO) demonstration Sept. 28 with partner Bell Textron Inc. The demonstration activity is a partnership with the FAA and industry partners to conduct demonstrations of potential commercial applications using different sizes of unmanned aircraft systems (UAS).

[Transcript Link](#)

Bell used the remotely-piloted APT 70 to conduct a flight representing an urgent medical transport mission. It is envisioned in the future that an operational APT 70 could provide rapid medical transport for blood, organs, and perishable medical supplies (payload up to 70 pounds). The APT 70 is estimated to move three times as fast as ground transportation.

<https://www.nasa.gov/centers/armstrong/features/second-sio-demo-flight.html>

2020 09 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/C53qYU-9QL0">https://youtu.be/C53qYU-9QL0</a>	NASA Armstrong & JPL Take Flight to Study California's Wildfire Burn Areas	As California experiences one of the worst wildfire seasons on record, NASA is leveraging its resources to help. NASA's C-20A aircraft took off from its base at NASA's Armstrong Flight Research Center Building 703 in Palmdale, California, carrying the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) instrument developed and operated by NASA's Jet Propulsion Laboratory.	<a href="#">0</a>	
				Attached to the bottom of the aircraft, the radar is flown repeatedly over an area to measure tiny changes in surface height with extreme accuracy. But the instrument is also highly effective at mapping burn scars, because radar bounces off vegetation in a different way than they do bare, freshly burned ground. What's more, UAVSAR flights over burn areas produce observations that are ten-times higher resolution than satellites, meaning flights can be quickly tasked to target vulnerable areas of burn scars after being identified in satellite images. After vegetation is burned away, sloping hillsides and valleys can become susceptible to mudslides during winter rains, often months later. The researchers intend to produce data products that can be used to identify areas most at risk.		
				 To learn more visit: <a href="https://www.nasa.gov/feature/jpl/nasa-takes-flight-to-study-californias-wildfire-burn-areas">https://www.nasa.gov/feature/jpl/nasa-takes-flight-to-study-californias-wildfire-burn-areas</a>		
				 Follow us on Instagram, Facebook, & Twitter @NASAArmstrong		
2020 08 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/J8HElbf_BAw">https://youtu.be/J8HElbf_BAw</a>	NASA Storytime Pilot Call Signs	In honor of National Aviation Day, NASA Armstrong pilots share their unique stories of how they received their pilot call signs, which are often described as nicknames.	<a href="#">Transcript Link</a>	
				Armstrong pilots David Larson, James Less, Wayne Ringelberg, Troy Asher, Dean Neeley, and Scott Howe share their stories.		
				Learn more about the pilots at <a href="https://www.nasa.gov/centers/armstrong/about/biographies/pilots/index.html">https://www.nasa.gov/centers/armstrong/about/biographies/pilots/index.html</a>		
				Follow us on social: Twitter, Facebook, & Instagram		
2020 06 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/WOVn25LShzQ">https://youtu.be/WOVn25LShzQ</a>	FOSS Readied for Validation Tests for Space Applications	Allen Parker, Fiber Optic Sensing System (FOSS) senior research engineer at NASA's Armstrong Flight Research Center in California, explains how FOSS in aeronautics is used on a wing to determine its shape and stress on its structure. In addition, Jonathan Lopez explains how a new FOSS unit variant designed for use in space applications will be sent to NASA's Langley Research Center in Virginia to determine if the new technology can withstand the harsh environments of a rocket launch and space travel.	<a href="#">Transcript Link</a>	

2020 06 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/znfnHVHcsY">https://youtu.be/znfnHVHcsY</a>	Intern Helps Fabricate and Fly a Potential Mars Airplane Prototype	Nathan Sam and Robert "Red" Jensen fabricate and fly a Prandtl-M aircraft at NASA's Armstrong Flight Research Center in California. The aircraft is the second of three prototypes of varying sizes to provide scientists with options to fly sensors in the Martian atmosphere to collect weather and landing site information for future human exploration of Mars.	<a href="#">Transcript Link</a>
				<a href="https://www.nasa.gov/centers/armstrong/features/sam-maximizes-afrfc-internship.html">https://www.nasa.gov/centers/armstrong/features/sam-maximizes-afrfc-internship.html</a>	
2020 05 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gK2jDwPrDTA">https://youtu.be/gK2jDwPrDTA</a>	Making Skies Safe for Unmanned Aircraft	NASA and its industry partners are taking unmanned aircraft systems closer to operating in harmony with other aircraft in the national airspace.	<a href="#">Transcript Link</a>
				The technology and procedures developed during a nearly decade-long program has been assisting the Federal Aviation Administration (FAA), develop the rules for certification of unmanned aircraft to safely coexist with other air traffic. The goal is to enable new commercial and public service opportunities, such as real-time surveillance of fires, infrastructure inspections for pipelines and medical transportation in the future.	
				NASA began its Unmanned Aircraft Systems (UAS) Integration in the National Airspace System (NAS) Project in 2011. Work since then has included multiple simulation efforts and six specific flight tests series that focused on validating these simulations and supporting the development of minimum operational performance standards (MOPS) for Detect and Avoid (DAA) systems.	
				<a href="https://www.nasa.gov/centers/armstrong/features/making-skies-safe-for-unmanned-aircraft.html">https://www.nasa.gov/centers/armstrong/features/making-skies-safe-for-unmanned-aircraft.html</a>	
2020 05 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RN8LOGsFoCI">https://youtu.be/RN8LOGsFoCI</a>	NASA Flight Opportunities Rapid Demonstration of Promising Space Technologies	NASA's Flight Opportunities program facilitates rapid demonstration of promising technologies for space exploration, discovery, and the expansion of space commerce through suborbital testing with industry flight providers. The program matures capabilities needed for NASA missions and commercial applications while strategically investing in the growth of the U.S. commercial spaceflight industry. These flight tests take technologies from ground-based laboratories into relevant environments to increase technology readiness and validate feasibility while reducing the costs and technical risks of future missions.	<a href="#">O</a>
				For more info on the Flight Opportunities program: <a href="https://www.nasa.gov/directorates/spacetech/flighthopportunities/index.html">https://www.nasa.gov/directorates/spacetech/flighthopportunities/index.html</a>	

2020 04 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zs1LWAg6ApY">https://youtu.be/zs1LWAg6ApY</a>	One Giant Leap for Lunar Landing Navigation	<p>NASA is relying on the most advanced technology to upgrade navigation capabilities for the next crewed mission to return astronauts to the Moon in 2024 and future human missions to Mars.</p> <p>A terrain relative navigation system developed by Draper Laboratory was flight tested on Masten Space Systems' Xodiac rocket on Sept. 11, 2019. Footage shows the flight of the navigation system on the rocket and interviews with principal investigators and Masten.</p> <p>The agency is using commercial companies' vehicles through NASA's Flight Opportunities program to flight test navigation sensors and related technologies that falls under a larger effort now referred to as SPLICE, or the Safe and Precise Landing – Integrated Capabilities Evolution project.</p> <p>NASA's Game Changing Development program is funding SPLICE to enable technology solutions such as future spacecraft system landing and hazard avoidance capabilities for deep space.</p> <p>For more information on the flight and technology:  <a href="https://www.nasa.gov/directorates/spacetech/flightopportunities/One_Giant_Leap_for_Lunar_Landing_Navigation">https://www.nasa.gov/directorates/spacetech/flightopportunities/One_Giant_Leap_for_Lunar_Landing_Navigation</a></p>	<a href="#">Transcript Link</a>
2020 04 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cF2S81xmGr0">https://youtu.be/cF2S81xmGr0</a>	Flight Test Series Provides a UAS Road Map	<p>NASA and its industry partners are taking unmanned aircraft systems closer to operating in harmony with other aircraft in the national airspace. The technology and procedures developed during a nearly decade-long program has been assisting the Federal Aviation Administration, develop the rules for certification of unmanned aircraft. NASA began its Unmanned Aircraft Systems (UAS) Integration in the National Airspace System (NAS) Project in 2011. Work since then has included multiple simulation efforts and six specific flight tests series that focused on validating these simulations and supporting the development of minimum operational performance standards (MOPS) for Detect and Avoid (DAA) systems. Flight Test Series Six (FT6) marks the end of these simulation efforts for the team. FT6 focused on informing revisions to the DAA related MOPS addressing Group 3 UAS and expanded operations in the NAS.</p> <p>Learn More:  <a href="https://www.nasa.gov/centers/armstrong/features/NASA-Partners-Work-with-FAA-to-Develop-UAS-Road-Map.html">https://www.nasa.gov/centers/armstrong/features/NASA-Partners-Work-with-FAA-to-Develop-UAS-Road-Map.html</a></p>	<a href="#">Transcript Link</a>
2020 04 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EUIblrjZUFY">https://youtu.be/EUIblrjZUFY</a>	Apollo Digest Series Spacecraft for Apollo	<p>This Apollo Digest is a brief, animated review of the soon-to-be first trip to the moon and back. It focusses the Saturn V, Service Module, Command Module, and Lunar Module, showing how rocket systems would work and how the astronauts dress in transit. Because it preceded the actual launch of Apollo 11 there are differences between plans and eventualities: see if you can spot them.</p>	<a href="#">Transcript Link</a>

2020 04 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9TJKJ15-Axk">https://youtu.be/9TJKJ15-Axk</a>	NASA Aeronautics and Space Report Moon Spacewear	A brief NASA Aeronautics and Space Report, this video shows how Apollo astronauts' full-pressure suits were made, the steps to assembly, even the hours it takes to make one pair of gloves. Charlie Duke tries on his suit and tells us if he's happy or not.	<a href="#">Transcript Link</a>
2020 02 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wsjdk790JII">https://youtu.be/wsjdk790JII</a>	All-Electric X-57 Moves Forward With Structural Ground Tests	NASA is making progress on the road to first flight for the agency's first all-electric X-plane, and first piloted X-plane in two decades, the X-57 Maxwell. Currently in its first configuration as an all-electric aircraft, called Mod II, X-57 underwent a series of structural ground tests, giving engineers at NASA a look at the vehicle's predicted characteristics during flight. These tests, which included ground vibration testing and cruise motor controller vibration testing, marked important tasks to check off as NASA moves X-57 closer to taxi tests. For more, visit NASA's X-57 page.	<a href="#">Transcript Link</a>
2020 01 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vxuDCROUtijk">https://youtu.be/vxuDCROUtijk</a>	Improving Flight One Breath at a Time	<p><a href="https://www.nasa.gov/centers/armstrong/features/pilot-breathing-assessment-program.html">https://www.nasa.gov/centers/armstrong/features/pilot-breathing-assessment-program.html</a></p> <p><a href="#">NASA is doing complex flight research to look at how pilots breathe to make it safer for them to fly. The NASA Engineering and Safety Center launched the Pilot Breathing Assessment program in 2019 and tapped NASA Armstrong to fly high-performance aircraft flights to better understand how flight conditions may cause pilots to experience a physiological episode during flight. The first phase of the research has involved five pilots, four aircraft, two aircrew equipment configurations and approximately 90 hours of flight at NASA Armstrong Flight Research Center in California.</a></p>	<a href="#">Transcript Link</a>

2019 12 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4pT2_sO-of8">https://youtu.be/4pT2_sO-of8</a>	Flying aboard NASA's ER-2 airplane New Moon-Seeking Sensor	A new instrument with its eye on the Moon is taking off aboard a high-altitude NASA plane to measure the Moon's brightness and eventually help Earth observing sensors make more accurate measurements.	<a href="#">Transcript Link</a>
				The airborne Lunar Spectral Irradiance Instrument (air-LUSI) is flying aboard NASA's ER-2 airplane. The ER-2 is able to soar above clouds, about 70,000 feet above ground. The flights, which occur at night to avoid scattered light from the Sun, began Nov. 13 and wrapped up Nov. 17 from NASA's Armstrong Flight Research Center in Palmdale, California.	
				The NASA-funded instrument is "measuring how much sunlight is reflected by the Moon at various phases in order to accurately characterize it and expand how the Moon is used to calibrate Earth observing sensors", said Kevin Turpie, a professor at the University of Maryland, Baltimore County, leading the air-LUSI effort. Turpie and his team are funded by NASA's Earth Science Division and the National Institute of Standards and Technology (NIST).	
				For more information: New Moon-Seeking Sensor Aims to Improve Earth Observations <a href="https://go.nasa.gov/35Q9qFf">https://go.nasa.gov/35Q9qFf</a>	
2019 12 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ID0qPJvtf8M">https://youtu.be/ID0qPJvtf8M</a>	Highlights of 2019 at NASA's Armstrong Flight Research Center	<a href="https://www.nasa.gov/centers/armstrong/home/index.html">https://www.nasa.gov/centers/armstrong/home/index.html</a>  <a href="#">2019 was an exciting, successful year at NASA's Armstrong Flight Research Center in Edwards, California. From critical milestones in the development NASA's first crewed X-planes in 20 years, to unmanned research in support of aeronautics, to breakthrough discoveries in the cosmos through SOFIA, and support of the agency's efforts to land the first woman and next man on the lunar surface, NASA Armstrong closes out the decade with a year of accomplishment, and excitement for what is to come. Visit <a href="https://www.nasa.gov/Armstrong">NASA.gov/Armstrong</a> for more.</a>	<a href="#">Transcript Link</a>
				NASA's four aeronautics research centers collaborated to create a new lightweight antenna to boost aircraft and antenna performance. This unique conformal antenna is designed to minimize drag to gain efficiency compared to a conventional satellite dish. Current satellite dishes are heavy and bulky and require a gimbal to maneuver and point at different satellites for communications.	
				This multicenter effort used aerogels to develop the conformal antenna under the Conformal Lightweight Antenna Structures for Aeronautical Communications Technologies (CLAS-ACT) activity within the Convergent Aeronautics Solutions project. NASA's Ames Research Center and Armstrong Flight Research Centers in California, Glenn Research Center in Ohio and Langley Research Center in Virginia are the agency's aeronautics centers.	
				Read more: <a href="https://www.nasa.gov/centers/armstrong/features/aerogel-antenna.html">https://www.nasa.gov/centers/armstrong/features/aerogel-antenna.html</a>	

2019 10 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IOoAki-xj-E">https://youtu.be/IOoAki-xj-E</a>	Delta-X 2016 Overview	River deltas and their wetlands are drowning as a result of sea level rise and reduced sediment inputs. The Delta-X mission will determine which parts will survive and continue to grow, and which parts will be lost.	<a href="#">Transcript</a> <a href="#">Link</a>
				For more information visit: <a href="https://deltax.jpl.nasa.gov/science/campaigns/">https://deltax.jpl.nasa.gov/science/campaigns/</a>	
2019 09 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pcPRHq4-njY">https://youtu.be/pcPRHq4-njY</a>	NASA Hispanic Heritage Month - Oscar Mejia	Oscar Mejia is a Lead F/A-18 Flight Operations Engineer at NASA Armstrong Flight Research Center where he works on proof of concept projects that will eventually make it onto NASA's experimental airplane: X-59 Quiet SuperSonic. He is responsible for the safe and reliable integration of experimental instrumentation which the aircraft is not normally designed for. He leads a team of pilots, technicians, and engineers during flight campaigns to ensure data is gathered for scientists and, most importantly, pilots make it home safely. While working multiple jobs at University, he earned his US Army Officer Commission through ROTC, Bachelor's Degree in Aerospace Engineering from Cal State Long Beach, and his Master's Degree from Cal State Northridge. As a first-generation immigrant from Nicaragua, Oscar faced many challenges on his path to a career at NASA. He now inspires our nation's youth to be passionate about their future with the same tenacity that was instilled in him by his mother.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more, please visit: <a href="https://www.nasa.gov/centers/armstrong/home/index.html">https://www.nasa.gov/centers/armstrong/home/index.html</a>	
2019 09 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OWLQ4cJMysY">https://youtu.be/OWLQ4cJMysY</a>	Sensors for Precision Landing on Other Worlds Prepares for Flight Test	A terrain relative navigation system developed by Draper of Cambridge, Massachusetts, will be tested on a Masten Space Systems Xodiac rocket. The flight is made possible with support from NASA's Flight Opportunities and Game Changing Development programs. The Draper technology will eventually be ported directly into a NASA-developed descent landing computer for additional testing.	<a href="#">0</a>
				This video shows one of a series of tether tests of the navigation system mounted on the rocket. Tether tests like this ensure the rocket and navigation technology are communicating before the actual suborbital launch and landing.	
				NASA and commercial partners are relying on the most advanced technology to upgrade navigation for future robotic and crewed missions to the Moon. The agency is developing a suite of precision landing technologies for possible use on future commercial lunar landers.	
				For more information, visit: <a href="https://go.nasa.gov/30394qX">https://go.nasa.gov/30394qX</a>	

2019 09 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tdfeARBY8Bk">https://youtu.be/tdfeARBY8Bk</a>	NASA's Student Airborne Research Program 2019	During Summer 2019, Twenty-eight undergraduate students participated in an eight-week immersive NASA airborne science field experience in Earth science research. NASA's Student Airborne Research Program (SARP) provides a unique opportunity for undergraduate students majoring in the sciences, mathematics and engineering to participate in all aspects of a NASA airborne science research campaign.	<a href="#">Transcript</a> <a href="#">Link</a>	
				To learn more about SARP visit: <a href="https://www.nasa.gov/centers/ames/earthscience/programs/airbornescience/studentairborneresearchprogram">https://www.nasa.gov/centers/ames/earthscience/programs/airbornescience/studentairborneresearchprogram</a>		
2019 08 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gVZRq8SQXRI">https://youtu.be/gVZRq8SQXRI</a>	NASA StoryTime Meeting Neil Armstrong - Nils & Neil	50 years ago today, Neil Armstrong celebrated his 39th birthday while stuck in quarantine at the Lunar Receiving Laboratory in Houston. Guests at the party included the 22 other people in quarantine and his family ... on the other side of the glass wall of the visitation room.	<a href="#">Transcript</a> <a href="#">Link</a>	
				Featured in this StoryTime, chief test pilot at NASA's Armstrong Flight Research Center in California, David Nils Larson recalls a few interactions with fellow Pilot, Neil Armstrong.		
				Learn more about Nils here: <a href="https://www.nasa.gov/centers/armstrong/features/larson-details-chief-test-pilot-work.html">https://www.nasa.gov/centers/armstrong/features/larson-details-chief-test-pilot-work.html</a>		
2019 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/63AK3H7BK6g">https://youtu.be/63AK3H7BK6g</a>	The NASA Interns	Have you ever wondered what it's like to be an intern at NASA? Now you can hear about first-hand experiences from 5 of our interns here at NASA's Armstrong Flight Research Center. From gliders that will test the Martian atmosphere, to aircraft that will cut your travel time in half, NASA internships offer hands on experience and potentially a lifelong career.	<a href="#">Transcript</a> <a href="#">Link</a>	
				For more information on NASA Internships visit: <a href="http://intern.nasa.gov/">http://intern.nasa.gov/</a>		
2019 06 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/No9Rq3VE0FI">https://youtu.be/No9Rq3VE0FI</a>	NASA Marks Milestones in Development of Electric X-57	NASA's X-57 project has marked two critical milestones in the development of the agency's first all-electric experimental aircraft, or X-plane, which will demonstrate the benefits of electric propulsion for aviation. Engineers for the first time tested the motors and propellers together for the project's Mod II activity, which is the first electric configuration of the vehicle. Meanwhile, NASA received delivery of the wing for the project's following Mod III activity, allowing testing to progress for two of X-57's three electric configurations. For more, please visit <a href="https://www.nasa.gov/X57">NASA.gov/X57</a>	<a href="#">Transcript</a> <a href="#">Link</a>	

2019 06 13 NASA Armstrong Flight Research Center <https://youtu.be/dL-JOHwfH38> Accelerated View X-56A Flight The X-56A remotely piloted research aircraft is suppressing flutter, which is a potentially destructive oscillation, at NASA's Armstrong Flight Research Center in California. The video of the aircraft takes the viewer on a journey through preparation, takeoff, mission flight, the control room and landing. The X-56A is intended to validate enabling technology for designing aircraft with highly flexible, lightweight wings. The use of less structurally-rigid wings could be critical to future long-range, fuel efficient airliners. [Transcript Link](#)

X-56A Team Makes Project Take Flight <https://go.nasa.gov/2OSswpT>

2019 06 06 NASA Armstrong Flight Research Center <https://youtu.be/kQY4teiRpfC> NASA Sponsors Annual FIRST Aerospace Valley Regional Robotics Competition NASA Robotics Alliance Project through the Science Mission Directorate sponsored the annual For Inspiration and Recognition of Science and Technology (FIRST) Aerospace Valley Regional Robotics Competition at Eastside High School in Lancaster, California. The event had over 150 volunteers, most of which were from the local aerospace community that include NASA Armstrong, Lockheed Martin, Boeing, Northrup Grumman, and the US Air Force. This is the second year in a row NASA helped sponsor the regional FIRST Robotic Competition since its core mission promotes science, engineering, technology and math (STEM). [0](#)

An estimated 500 to 700 high-school students competed in the 2019 season challenge, "Destination: Deep Space" presented by Boeing. The "Destination: Deep Space" game pairs two alliances to collect samples on Planet Primus. Teams faced unpredictable terrain and weather patterns that made remote robot operation essential to their mission. Alliances gathered as many cargo pods as possible and prepared their spaceships before the next sandstorm arrived, during which the driver had limited visibility and the robots needed to independently follow pre-programmed instructions or be operated by human drivers via video.

2019 05 24 NASA Armstrong Flight Research Center [https://youtu.be/OfgRzDn\\_f-A](https://youtu.be/OfgRzDn_f-A) Systems Integration and Operationalization 2020 Demonstration Activities The Systems Integration and Operationalization (SIO), demonstration activities is a partnership between NASA and industry partners with the goal of accelerating routine Unmanned Aircraft System (UAS) operations into the National Airspace System (NAS). SIO will show robust UAS operations into the NAS by leveraging integrated DAA, C2, and state of the art vehicle technologies with a pathway toward certification to inform the FAA UAS integration policies and operational procedures. [0](#)

NASA is partnering with Bell, General Atomics-ASI, and American Aerospace Technologies Inc (AATI) to perform SIO demonstration activities in 2020. AATI has acquired the assets of the Resolute Eagle from PAE-ISR.

NASA Previews its 2020 Unmanned Aircraft Demonstration Activities <https://go.nasa.gov/2HkEbb9>

2019 05 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UyFhTjkTZA">https://youtu.be/UyFhTjkTZA</a>	NASA Airborne Mission Measures Winds Using Lasers	<p>Researchers from NASA's Langley Research Center flew onboard the agency's DC-8 flying laboratory to test an improved version of Doppler Aerosol Wind Lidar (DAWN), an airborne instrument that uses pulsed lasers at varying scan angles to detect the movement of atmospheric aerosols such as dust or sea salt. In detecting those movements, it can profile wind vector — both speed and direction. The team is also brought along another instrument called the High Altitude Lidar Observatory (HALO). HALO uses a combined Differential Absorption Lidar (DIAL) and High Spectral Resolution Lidar (HSRL) to profile atmospheric aerosols and water vapor. Together these instruments provide a better picture of wind measurements and advance technology that could help improve climate and weather predictions.</p> <p>In additions to testing these new wind profiling instruments, researchers also sought to validate measurements from Atmospheric Dynamics Mission Aeolus (ADM Aeolus), a European Space Agency (ESA) satellite that also uses doppler lidar to measure wind profiles.</p> <p>The mission took flight from the DC-8's base of operations at NASA's Armstrong Flight Research Center Building 703 in Palmdale, California.</p> <p>More Airborne Science @ AFRC <a href="https://go.nasa.gov/2LIYzHw">https://go.nasa.gov/2LIYzHw</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2019 04 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rgr7pSeNZ7o">https://youtu.be/rgr7pSeNZ7o</a>	NASA Test Pilot Day in the Life	<p>David Nils Larson, the chief test pilot at NASA's Armstrong Flight Research Center in California, talks about his job and some of the influences that guided his career.</p> <p>Learn more about Nils here: <a href="https://www.nasa.gov/centers/armstrong/features/larson-details-chief-test-pilot-work.html">https://www.nasa.gov/centers/armstrong/features/larson-details-chief-test-pilot-work.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2019 03 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TjpwN5WYk1c">https://youtu.be/TjpwN5WYk1c</a>	NASA Women's History Month - April Torres	<p>April Torres is an electronics technician and telemetry specialist at NASA's Armstrong Flight Research Center in Edwards, California. She is currently working in the Telemetry Shop within the center's Engineering Support Group. The Telemetry Shop is responsible for verifying and testing flight research instrumentation. They ensure the proper setup and performance of the instrumentation systems while the units are being exposed to specified environmental requirements that simulate flight conditions.</p> <p>Throughout her career at NASA, April has worked to support over 50 projects that include the Active Aeroelastic Wing (AAW), Adaptive Compliant Trailing Edge (ACTE), Vehicle Integrated Propulsion Research (VIPR), Quiet Spike, Stratospheric Observatory for Infrared Astronomy (SOFIA), and the Orion Launch Abort System Pad Abort-1 Crew Escape Vehicle test that would pull the astronaut capsule from the rocket at the launch pad should an emergency arise. The most current project has been the Ascent Abort-2 of the Orion's launch abort system, which pulls the astronaut capsule from the booster throughout the launch phase until entering space. NASA is returning to the Moon with astronauts. April has been at Armstrong Flight Research Center for 19 years and makes a great asset to the NASA family.</p> <p>"Diversity and inclusion are integral to mission success at NASA." -Charles F. Bolden, Former NASA Administrator and astronaut</p>	<a href="#">Transcript Link</a>
2019 03 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/443RLEnuUI">https://youtu.be/443RLEnuUI</a>	NASA Captures First Air-to-Air Images of Supersonic Shockwave Interaction in Flight	<p><a href="https://www.nasa.gov/centers/armstrong/features/supersonic-shockwave-interaction.html">https://www.nasa.gov/centers/armstrong/features/supersonic-shockwave-interaction.html</a></p> <p><a href="#">NASA has successfully tested an advanced air-to-air photographic technology in flight, capturing the first-ever images of the interaction of shockwaves from two supersonic aircraft in flight. The images, originally monochromatic and shown here as composite colored images, were captured during the fourth phase of Air-to-Air Background Oriented Schlieren flights, or AirBOS, which took place at NASA's Armstrong Flight Research Center in Edwards, California. The flight series saw successful testing of an upgraded imaging system capable of capturing high-quality images of shockwaves, rapid pressure changes which are produced when an aircraft flies faster than the speed of sound, or supersonic. Shockwaves produced by aircraft merge together as they travel through the atmosphere and are responsible for what is heard on the ground as a sonic boom.</a></p> <p><a href="#">The system will be used to capture data crucial to confirming the design of the agency's X-59 Quiet SuperSonic Technology X-plane, or X-59 QueSST, which will fly supersonic, but will produce shockwaves in such a way that, instead of a loud sonic boom, only a quiet rumble may be heard. The ability to fly supersonic without a sonic boom may one day result in lifting current restrictions on supersonic flight over land.</a></p>	<a href="#">0</a>

2019 02 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/h0Cw0hdZaEY">https://youtu.be/h0Cw0hdZaEY</a>	360 F-18 WSPRR Sonic Boom Dive	A NASA F/A-18 performs the quiet supersonic dive maneuver of NASA's Armstrong Flight Research Center in California. The dive include climbing to 50,000 feet, followed by a supersonic, inverted dive. This creates shockwaves in such a way that they are quieter in a specific area. The dive has been used in support of NASA's Commercial Supersonic Technology project, to study perception feedback provided by members of the public.	<a href="#">Transcript Link</a>
2019 02 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ARaRqA-Mr2g">https://youtu.be/ARaRqA-Mr2g</a>	NASA Community College Aerospace Scholars Program, Fall 2018	The NASA Armstrong Flight Research Center Office of STEM Engagement hosted the NASA Community College Aerospace Scholars (NCAS) of fall 2018. NCAS is designed to inspire students to pursue majors within science, technology, engineering and mathematics (STEM) and encourage them to finish a 2-year degree or transfer to a 4-year university to pursue a NASA-related field or career. The program allows students to apply their knowledge in a real-life professional environment.  Students from around the country participate in NCAS through a 4-day engineering-design competition at NASA's Armstrong Flight Research Center. The 4-day workshop educates students how an actual NASA project would be organized with designated roles that include: a project manager, specialized engineers, procurement, and marketing managers.  For more information visit <a href="https://nas.okstate.edu/ncas/">https://nas.okstate.edu/ncas/</a>	<a href="#">Transcript Link</a>
2019 02 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RoXnwSkIvho">https://youtu.be/RoXnwSkIvho</a>	Experimental Wing for Maximized Efficiency Put to Test	<a href="https://www.nasa.gov/centers/armstrong/features/calibration_research_arch_wing.html">https://www.nasa.gov/centers/armstrong/features/calibration_research_arch_wing.html</a>  <a href="#">An experimental, high-aspect ratio wing, designed to reduce weight and maximize structural and fuel efficiency, underwent structural tests at NASA Armstrong Flight Research Center's Flight Loads Laboratory. The 39-foot-long Passive Aeroelastic Tailored wing could one day lead to longer, thinner wings for aircraft. The tests also gave engineers valuable insight into ways to test highly flexible, high aspect ratio wings.</a>	<a href="#">Transcript Link</a>

2018 12 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/a-sBukH3wiw">https://youtu.be/a-sBukH3wiw</a>	Explore NASA Armstrong Flight Research Center	NASA's Armstrong Flight Research Center at Edwards Air Force Base in California supported the agency in 2018 by advancing flight, Earth and space technology through a number of center milestones. As the agency works to integrate NASA technology into commercial airspace, Armstrong is leading the development of various technologies. The center is also supporting technology demonstrations through flight and sharing the results with the aviation industry and the public. The center continues its tradition of early approach and landing flight research and testing for new spacecraft. Through accomplishing dynamic flight research and sharing with industry, academia and other government communities, Armstrong is facilitating an understanding of aeronautics concepts and demonstrating the role that flight will play in the nation's future.	<a href="#">Transcript Link</a>
				For more information visit: <a href="https://www.nasa.gov/centers/armstrong/">https://www.nasa.gov/centers/armstrong/</a>	
2018 11 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SGLBCp7tg8M">https://youtu.be/SGLBCp7tg8M</a>	NASA Armstrong Explore as One	CJ Bixby is the Chief of the Systems Engineering and Integration Branch at Armstrong Flight Research Center. She manages a team that provides lead technical representatives on a project and as such, they ensure that projects are performed safely, that technical objectives are accomplished, and that the technical systems engineering functions are performed.	<a href="#">Transcript Link</a>
				Explore as One aims to celebrate the one thing that we know will exist 60 years in the future – the values and the caliber of the individuals who work here.	
2018 11 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wYw3ceXrCNg">https://youtu.be/wYw3ceXrCNg</a>	NASA Mobilizes to Aid California Wildfire Response	On Nov. 15, 2018, NASA's C-20A aircraft took off from its base at NASA's Armstrong Flight Research Center Building 703 in Palmdale, California, carrying the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR). The instrument, developed and operated by NASA's Jet Propulsion Laboratory, observed and mapped fire scar in the areas affected by the Woosley Fire. The goal was to identify areas at risk of catastrophic mudslides in the coming winter rains.	<a href="#">Transcript Link</a>

2018 11 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mFdNcCsmYyI">https://youtu.be/mFdNcCsmYyI</a>	NASA Tests Space Tech on Suborbital Rocket	Three NASA technology demonstration payloads launched aboard UP Aerospace's SpaceLoft 12 mission from Spaceport America in New Mexico on Sept. 12.	<a href="#">Transcript Link</a>
				<p>The suborbital rocket carried an umbrella-like heat shield called Adaptable Deployable Entry and Placement Technology (ADEPT). Developed by NASA's Ames Research Center in California's Silicon Valley, ADEPT's unique design could be used for planetary lander and sample return missions. The flight tested the heat shield's deployment sequence and entry performance.</p>	
				<p>Another Ames payload called Suborbital Flight Environment Monitor (SFEM-3) measures the internal environment of suborbital rockets carrying experiments. The system monitored acceleration, temperature and pressure within the payload bay during flight and could benefit future suborbital launches.</p>	
				<p>The third technology is from NASA's Kennedy Space Center in Florida and is the Autonomous Flight Termination System (AFTS). While the termination device was not active during launch, the payload tested hardware and software performance in the high dynamics of suborbital flight.</p>	
				<p>The payload flight tests were funded by the Space Technology Mission Directorate's Flight Opportunities program, managed at NASA's Armstrong Flight Research Center in Edwards, California.</p>	
2018 11 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RdR4GTJODgw">https://youtu.be/RdR4GTJODgw</a>	NASA Armstrong Receives First of Three F A-18Bs	<a href="https://www.nasa.gov/centers/armstrong/features/nasa-armstrong-receives-first-of-three-fa-18bs.html">https://www.nasa.gov/centers/armstrong/features/nasa-armstrong-receives-first-of-three-fa-18bs.html</a>	<a href="#">Transcript Link</a>
				<p><a href="#">The first of three "new" F/A-18B Hornets arrived at NASA's Armstrong Flight Research Center in California Nov. 6.</a></p>	
				<p><a href="#">The first F/A-18B came from the U.S. Naval Air Station Patuxent River in Maryland, as will the second aircraft in the coming weeks. The third Hornet is coming from the U.S. Naval Air Joint Reserve Base in Fort Worth, Texas, in early 2019.</a></p>	
				-	
				<p><a href="#">The center uses F/A-18s as part of its fleet of research aircraft, to accompany other aircraft on missions as a second set of eyes and for pilot training. The B models are two-seat versions of the aircraft, not unlike Armstrong's F/A-18B No. 846, that also fly photographers and videographers to document research missions. Armstrong contacted the Navy when officials learned earlier in the year that F/A-18s might become available.</a></p>	

2018 09 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PQtwr56rRmw">https://youtu.be/PQtwr56rRmw</a>	NASA Hispanic Heritage Month - Manny Rodriguez	Jose "Manny" Rodriguez is an Aircraft Mechanic & Crew Chief at NASA's Armstrong Flight Research Center in Edwards, California. In his current role he ensures that aircraft & aircraft systems at the center are safely maintained. During his time at NASA he has worked on many aircraft but mainly focuses on the Gulfstream-III (G3). Manny has been at Armstrong Flight Research Center since 2014 & makes a great asset to the NASA family.	<a href="#">Transcript Link</a>
				<p>"Diversity and inclusion are integral to mission success at NASA." -Charles F. Bolden, Former NASA Administrator</p>	
2018 08 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zdRVhz bRrig">https://youtu.be/zdRVhz bRrig</a>	NASA Prepares for Future of Supersonic Experimental Flight	Six decades of NASA's supersonic research is leading the way into a new era of aviation. This research has resulted in cutting-edge technology and a unique aerodynamic design that will demonstrate the ability to fly faster than the speed of sound without creating a loud sonic boom. This will be done in flight, through the agency's newest supersonic X-plane, the X-59 Quiet SuperSonic Technology (QueSST) aircraft.	<a href="#">Transcript Link</a>
				<p>While preliminary flight research continues using F-18 research aircraft, NASA's test pilots and engineers are developing and training with state-of-the-art tools, including simulators, an advanced eXternal Vision System (XVS), and community response technologies in anticipation of the X-59, which will be used to measure public response to sonic thumps beginning in 2023.</p>	
				<p>More on Supersonic Flight → <a href="https://go.nasa.gov/2o6jaqg">https://go.nasa.gov/2o6jaqg</a></p>	
2018 08 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IG9Mm3b400">https://youtu.be/IG9Mm3b400</a>	NASA Community College Aerospace Scholars, Summer 2018	The NASA Armstrong Flight Research Center's Office of Education recently hosted the NASA Community College Aerospace Scholars (NCAS) program for summer 2018. NCAS is designed to inspire students to pursue majors within STEM, transfer to a 4-year university, and ultimately graduate with a 4-year degree in a STEM-related field.	<a href="#">Transcript Link</a>
				<p>Community college students from around the country participate in NCAS through a four-day MARS Lego Rover competition at NASA's Armstrong Flight Research Center in Edwards, CA. The competition allows students to connect with industry professionals and to apply their education in a real-life professional environment.</p>	

2018 08 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/loiXg7daXhU">https://youtu.be/loiXg7daXhU</a>	NASA Student Intern Program Celebrates 10 Years of Studying Earth	During Summer 2018, Twenty-eight undergraduate students participated in an eight-week immersive NASA airborne science field experience in Earth science research. NASA's Student Airborne Research Program (SARP) provides a unique opportunity for undergraduate students majoring in the sciences, mathematics and engineering to participate in all aspects of a NASA airborne science research campaign.	<a href="#">Transcript</a> <a href="#">Link</a>	
				Flying aboard NASA's DC-8 airborne laboratory, the students sampled and measured atmospheric gases to study air quality in the Los Angeles basin and California's Central Valley. Students will also use remote-sensing instruments on NASA's ER-2 to study drought, fire burn scars and debris flows in Southern California and ocean biology along the California coast.		
				To learn more about SARP visit: <a href="https://baeri.org/sarp">https://baeri.org/sarp</a>		
2018 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/WnZ1b4c36GU">https://youtu.be/WnZ1b4c36GU</a>	PRANDTL Interns 2018-Pressure System Flight	A flight series Aug. 1, 2018 at NASA's Armstrong Flight Research Center in California demonstrated their system could measure pressure from the surface of the aircraft's wing, providing additional evidence that a wing design method using twist can dramatically increase aircraft efficiency.	<a href="#">Transcript</a> <a href="#">Link</a>	
2018 08 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4Q8ILQxWgmU">https://youtu.be/4Q8ILQxWgmU</a>	Sharing Air Integrating Unmanned Aircraft with Manned Aircraft in the National Airspace	NASA has been leading efforts designed to help integrate unmanned aircraft into the world around us. On June 12, NASA completed a major program milestone by successfully demonstrating the maturity of Detect and Avoid (DAA) technology by flying an Unmanned Aircraft System (UAS) out in the National Airspace System (NAS). The DAA technology served as alternate means of the Federal Aviation Administration's "See and Avoid" requirements, allowing NASA to operate their Ikhana aircraft in the NAS without a chase vehicle. The results from this effort will inform potential changes to procedures, rules and regulations involving unmanned aircraft operation in National Airspace.	<a href="#">0</a>	
				Learn more about the successful flight by visiting: <a href="https://www.nasa.gov/press-release/na...">https://www.nasa.gov/press-release/na...</a>		
				For more information on NASA's Unmanned Aircraft Systems integration in the National Airspace System project, visit: <a href="https://go.nasa.gov/2sx9VCn">https://go.nasa.gov/2sx9VCn</a>		

2018 08 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/A0WCeqDDsiQ">https://youtu.be/A0WCeqDDsiQ</a>	PRANDTL Interns 2018- Pressure System Integration	Deborah Jackson is one of a group of interns at NASA's Armstrong Flight Research Center in California who meticulously helped connect each of the 89 tubes, from a system they developed, along a subscale glider's wingspan.	<a href="#">Transcript Link</a>
				To learn more: <a href="https://www.nasa.gov/centers/armstrong/features/prandtl_epm_system_provides_key_data.html">https://www.nasa.gov/centers/armstrong/features/prandtl_epm_system_provides_key_data.html</a>	
2018 08 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3pTkGr8cxIk">https://youtu.be/3pTkGr8cxIk</a>	PRANDTL Interns 2018- Pressure System Testing	Interns at NASA's Armstrong Flight Research Center work to test system that they developed that will fly on a subscale glider.	<a href="#">Transcript Link</a>
				To learn more: <a href="https://www.nasa.gov/centers/armstrong/features/prandtl_epm_system_provides_key_data.html">https://www.nasa.gov/centers/armstrong/features/prandtl_epm_system_provides_key_data.html</a>	
2018 08 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jqn27ph1bHs">https://youtu.be/jqn27ph1bHs</a>	NASA StoryTime Meeting Neil Armstrong	Chief Scientist at Armstrong Flight Research Center, Albion H. Bowers recalls the moment he met Neil Armstrong. Bowers also shares lighthearted stories about Armstrong during his time as a pilot & his history in California's Antelope Valley where AFRC is located.	<a href="#">Transcript Link</a>
				As a research engineer specializing in aerodynamics and systems engineering, Bowers has been involved in a number of projects involving aerodynamics, boundary layer airflow, fundamental fluid dynamics, flight mechanics, advanced controls, and structures research at NASA's Armstrong Flight Research Center.	
				To learn more about Al Bowers please visit: <a href="https://go.nasa.gov/2O5Xohx">https://go.nasa.gov/2O5Xohx</a>	

2018 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GhilnEuLwIY">https://youtu.be/GhilnEuLwIY</a>	Government and Industry Team Up to Flight test Technology	<a href="https://www.nasa.gov/directorates/spacetech/flightopportunities/index.html">https://www.nasa.gov/directorates/spacetech/flightopportunities/index.html</a>  <a href="#">NASA's Flight Opportunities program partners with U.S companies to mature space technology through flight on suborbital commercial flight vehicles. By flight testing technologies needed for space exploration, the program also fosters the development and use of commercial capabilities for technology demonstrations.</a>	<a href="#">Transcript Link</a>
-					
<a href="#">The program provides access to space-relevant environments through the use of commercial reusable suborbital launch vehicles (sRLVs), rocket powered Vertical Take-off Vertical Landing (VTVL) platforms, high-altitude balloons and parabolic aircraft flights. These platforms bridge the critical gap between laboratory or ground-based testing and demonstration of technical readiness in a mission-relevant, operational environment.</a>					
2018 06 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QpJK9zI2sM">https://youtu.be/QpJK9zI2sM</a>	NASA Sponsors Antelope Valley's Inaugural FIRST Robotics Competition	<p>The Antelope Valley hosted its inaugural FIRST Robotics Competition (FRC) on April 6-7, 2018, in the gymnasium of Eastside High School in Lancaster, California. The regional competition "Aerospace Valley Regional" serves as a championship-qualifying robotics competition and is sponsored by NASA, Lockheed, Northrup, Boeing and several other local organizations. An estimated 500 to 700 high-school students on 35 teams from around the world, competed in the regional's 2018 season challenge, "FIRST POWER UP."</p> <p>The "FIRST POWER UP" game pairs two alliances of video game characters with their human operators as they work to defeat a "boss" to escape an arcade game where they are trapped inside. Each match begins with a 15-second autonomous period in which robots operate only on pre-programmed instructions. During this period, robots work to earn points according to the game's rules. During the remaining two minutes and 15 seconds, student drivers' control robots to earn points. For more information about NASA's involvement with the FIRST Robotics Competition, click here: <a href="https://www.nasa.gov/audience/forstudents/9-12/features/first-robotics-index.html">https://www.nasa.gov/audience/forstudents/9-12/features/first-robotics-index.html</a></p>	<a href="#">0</a>
2018 06 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Pc4ZOxqRBkl">https://youtu.be/Pc4ZOxqRBkl</a>	Masten Space Systems' Completes Test of Surface Sampling Technology	<p>Honeybee Robotics in Pasadena, California, flight tested its pneumatic sampler collection system, PlanetVac, on Masten Space Systems' Xodiac rocket on May 24, launching from Mojave, California, and landing to collect a sample of more than 320 grams of top soil from the surface of the desert floor. NASA Flight Opportunities program funded the test flight.</p>	<a href="#">0</a>
<p>For more information about the Flight Opportunities Program, visit: <a href="http://www.nasa.gov/flightopportunities">http://www.nasa.gov/flightopportunities</a></p>					

2018 06 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/x79L0AffyEk">https://youtu.be/x79L0AffyEk</a>	NASA Prepares to Fly a Large Unmanned Aircraft in Public Airspace Without Chase Plane for First Time	NASA's remotely-piloted Ikhana aircraft, based at the agency's Armstrong Flight Research Center in Edwards, California, performs one of several flight tests in preparation to fly in the National Airspace System without a safety chase aircraft. On June 12, 2018, NASA successfully flew the historic flight, which will help to move the United States one step closer to normalizing unmanned aircraft operations in the airspace used by commercial and private pilots.	<a href="#">Q</a>
<p>Learn more about the successful flight by visiting:  <a href="https://www.nasa.gov/press-release/nasa-flies-large-unmanned-aircraft-in-public-airspace-without-chase-plane-for-first">https://www.nasa.gov/press-release/nasa-flies-large-unmanned-aircraft-in-public-airspace-without-chase-plane-for-first</a></p>					
<p>For more information on NASA's Unmanned Aircraft Systems integration in the National Airspace System project, visit:  <a href="https://go.nasa.gov/2sx9VCn">https://go.nasa.gov/2sx9VCn</a></p>					
2018 05 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UWW2eNcxWNg">https://youtu.be/UWW2eNcxWNg</a>	Approach and Landing Tests Film Documentary	Documentary of shuttle Enterprise on the Shuttle Carrier Aircraft (SCA), separating from the SCA in flight, and in free-flight. Footage shows SCA pilots Fitzhugh "Fitz" Fulton and Tom McMurtry heading to the aircraft, and Gordon Fullerton and Fred Haise following a flight in the prototype shuttle.	<a href="#">Transcript Link</a>
<p>During the nearly one-year-long series of tests, Enterprise was taken aloft on the SCA to study the aerodynamics of the mated vehicles and, in a series of five free flights, tested the glide and landing characteristics of the orbiter prototype.</p>					
2018 05 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bWrEPzeHCBg">https://youtu.be/bWrEPzeHCBg</a>	Oblique Wing Flights	Flown in the mid 70's, this Oblique Wing was a large-scale R/C experimental aircraft to demonstrate the ability to pivot its wing to an oblique angle, allowing for a reduced drag penalty at transonic speeds.	<a href="#">Transcript Link</a>
2018 05 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/u1FoytXVedQ">https://youtu.be/u1FoytXVedQ</a>	25 Years of Flight Research	A narrated film documentary of flight tests at the NACA and NASA's Flight Research Center shows the X-1, D-558-II, X-3, X-4, X-5, and X-15 in flight and on the ground. The story describes what each aircraft contributed to flight's expansion.	<a href="#">Transcript Link</a>

2018 04 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/scSlIo1BhiA">https://youtu.be/scSlIo1BhiA</a>	NASA Scientists Use New Airborne Radar Instrument to Measure Ocean Winds and Currents	NASA scientists are hard at work trying to unlock mysteries of our planet's ocean surface currents and winds using a new Earth science radar instrument called DopplerScatt. Flying aboard a B-200 aircraft, the instrument is a spinning radar that "pings" the ocean's surface, allowing it to take measurements from multiple directions at once. It's a step up from previous technology, which could simultaneously measure currents from one or two directions at the most, and couldn't measure properties of the sea surface as completely as this new instrument.	<a href="#">Q</a>
2018 03 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/r5TjMCjWwZs">https://youtu.be/r5TjMCjWwZs</a>	NASA Women's History Month - Erin Waggoner (AFRC)	Erin Waggoner is an Aerospace Engineer in the Aerodynamics and Propulsion Branch at NASA Armstrong Flight Research Center. Erin has a BS in Aerospace Engineering from Wichita State University and a MS in Aeronautics and Astronautics from Purdue University. Her work includes planning, coordinating, and executing ground tests; analyzing data; writing papers; and serving as a Flight Test Engineer onboard test aircraft.	<a href="#">Transcript Link</a>
2018 03 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ugD-FyA4sOQ">https://youtu.be/ugD-FyA4sOQ</a>	NASA Tests New Antenna Aboard the Ikhana Aircraft	NASA Armstrong Flight Research Center recently partnered with NASA Glenn Research Center to test an antenna measuring system in preparation for building a new conformal antenna aboard NASA's Ikhana aircraft. The new conformal antenna will be placed under Ikhana's radome (a structural enclosure on the aircraft that protects the antenna) and is designed to minimize unwanted radiation in undesired directions from the antenna (known as side lobes).  In this 1-minute, 9-second video, NASA highlights the methods used by NASA engineers for validating the technology and preparing it for optimal use during flight tests scheduled for September 2018.	<a href="#">Transcript Link</a>
2018 03 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UfxYHvlav5A">https://youtu.be/UfxYHvlav5A</a>	NASA Armstrong Super Blue Blood Moon 2018 Lunar Eclipse Highlights	Highlights from the NASA Armstrong Flight Research Center and surrounding area of the Super Blue Blood Moon Lunar Eclipse on Jan. 31. The full moon was the third in a series of "supermoons," when the Moon is closer to Earth in its orbit -- known as perigee -- and about 14 percent brighter than usual. It was also the second full moon of the month, commonly known as a "blue moon." As the super blue moon passed through Earth's shadow, viewers in some locations experienced a total lunar eclipse. While in Earth's shadow, the moon also took on a reddish tint -- which is sometimes referred to as a "blood moon."	<a href="#">Transcript Link</a>

2018 02 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/p4zNUmanbe0">https://youtu.be/p4zNUmanbe0</a>	The Successful Maiden Flight for NASA's Newest Subscale Aircraft	On Jan. 18, 2018, Armstrong's Subscale Research Lab crew piloted the Cub (MicroCub) for its inaugural flight, successfully demonstrating the aircraft's airworthiness. The MicroCub is a Bill Hempel 60-percent-scale super cub, which has been modified by Armstrong to support engineering campaigns focused on the integration of unmanned aircraft systems (UAS) into the National Airspace System (NAS). Specifications of the vehicle include a 21-foot wingspan, a Piccolo Autopilot guidance system and a JetCat SPT-15 Turboprop.	<a href="#">Transcript Link</a>
				In this 1-minute, 2-second video, NASA Armstrong highlights the initial flight of the aircraft, validating the ground handling and flight characteristics of the MicroCub—a critical phase needed to educate engineers and validate key technologies that will directly support UAS research and development.	
				Read more, here: <a href="https://www.nasa.gov/centers/armstrong/features/microcub_first_flight.html">https://www.nasa.gov/centers/armstrong/features/microcub_first_flight.html</a>	
2018 02 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/88tkvceki0g">https://youtu.be/88tkvceki0g</a>	NASA and DLR Test Biofuel in Germany	In January 2018, NASA and the German Aerospace Agency (DLR) combined resources to conduct the NASA/DLR Multidisciplinary Airborne Experiment (ND-MAX) in Germany. NASA supplied its DC-8 flying laboratory and DLR provided its ATRA Airbus A320. During airborne operations of the experiment, the DC-8 flew behind the ATRA, and used instruments supplied by both agencies to measure exhaust composition and contrail particulates from the ATRA as it burned three types of standard and alternative fuels. The ATRA also participated in a series of ground tests where emissions were tested by a team of scientists and instruments looking at surface measurements of the same standard and alternative fuel types. The different collection methods of these emissions help scientists to better understand their effects at various levels within the atmosphere.	<a href="#">Transcript Link</a>
				To learn more about the ND-MAX mission, visit: <a href="https://www.nasa.gov/aero/nasa-takes-international-aviation-research-to-the-max">https://www.nasa.gov/aero/nasa-takes-international-aviation-research-to-the-max</a>	
2018 02 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/igR1grUQyl">https://youtu.be/igR1grUQyl</a>	X-56- The Future of Flight- Part 1 Active Controls	NASA is investigating the ways flexible, light weight, ultra-efficient lift wings may increase efficiency for aircraft, and how to address their challenge with flutter in flight. One technology that may make it possible to stabilize flutter, increasing both aircraft efficiency and safety, is the use of advanced flight control systems. NASA's X-56 aircraft aims to advance aeroservoelastic technology through flight research, using flight profiles in which flutter occurs in order to demonstrate that onboard instrumentation can not only accurately predict and sense the onset of wing flutter, but also be used by the control system to actively suppress aeroelastic instabilities.	<a href="#">Transcript Link</a>

2018 02 01 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/UHE7-fUQyTc> A view of the  
January 31, 2018  
Super Blue Blood  
Moon from  
NASA's  
Armstrong Flight  
Research Center

[0](#)

2018 01 23 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/OP2KlgSRm7g> Airvolt Propeller  
Tests

Using a test stand called Airvolt, engineers at NASA's Armstrong Flight Research Center in California are testing electric motors and their motor controllers, collecting data to help verify an experimental electric propulsion system before it takes flight. If successful, the motors, along with their controllers and propellers, can then be integrated into what will become NASA's first all-electric experimental airplane, or X-plane – the X-57 Maxwell.

[Transcript  
Link](#)

2018 01 18 NASA  
Armstrong  
Flight  
Research  
Center

[https://youtu.be/9y1kkG2\\_QpE](https://youtu.be/9y1kkG2_QpE) NASA Examines  
Technology To  
Fold Aircraft  
Wings In Flight

NASA conducts a flight test series to investigate the ability of an innovative technology to fold the outer portions of wings in flight as part of the Spanwise Adaptive Wing project, or SAW. Flight tests took place at NASA Armstrong Flight Research Center in California, using an autonomous subscale UAV called Prototype Technology-Evaluation Research Aircraft, or PTERA, provided by Area-I.

[Transcript  
Link](#)

NASA Glenn Research Center in Cleveland developed the alloy material, and worked with Boeing Research & Technology to integrate the material into an actuator. The alloy is triggered by temperature to move the outer portions of wings up or down in flight.

The ability to fold wings to the ideal position of various flight conditions may produce several aerodynamic benefits for both subsonic and supersonic aircraft.

For more information on SAW visit:

<https://www.nasa.gov/centers/armstrong/feature/nasa-tests-new-alloy-to-fold-wings-in-flight.html>

2018 01 11 NASA Armstrong Flight Research Center <https://youtu.be/EUGVzs0gY8U> GO1 Inert Test Article Captive Carry Generation Orbit Launch Services, Inc. (GO) completed the GO1 Inert Test Article captive carry flight test at NASA's Armstrong Flight Research Center in December. Under a public-private partnership with NASA, GO developed the GO1-ITA, a mass properties and outer mold line simulator for the GO1 hypersonic flight testbed and earned NASA airworthiness approval for flight on NASA's C-20a. [Transcript Link](#)

NASA's C-20a was originally modified to add a centerline hard point to carry the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) pod. Together with the NASA Armstrong team, a campaign of three flight tests was conducted, successfully completing all test objectives including clearing the operational flight envelope of the C-20a with the GO1-ITA mounted to the centerline hard point, and demonstrated the unique launch maneuver designed for air launch of the GO1 on operational flights starting in 2019. Data collected during the campaign will be used to validate models and inform the ongoing design and development of GO1.

2018 01 02 NASA Armstrong Flight Research Center <https://youtu.be/aKZgHPTBcVI> A Look Back 2017 Highlights at NASA Armstrong Flight Research Center NASA's Armstrong Flight Research Center at Edwards Air Force Base in California, supported the agency in 2017 by advancing flight research through a number of center milestones. From Armstrong's modified Gulfstream III aircraft's support of the 2017 Total Solar Eclipse, to the center's F-18's extensive supersonic research, Armstrong never fails to demonstrate its passion and dedication to building a stronger foundation for the future of aerospace. The center's research continues to become increasingly recognizable through its ability to partner with the aviation and space industry contributing to the nation's efforts to provide more sustainable, affordable and safe flight research. [0](#)

As the agency works to integrate NASA technology into commercial airspace, Armstrong is at the forefront of not only leading the development of various flight technologies, but is also supporting NASA aeronautics by demonstrating these technologies in flight and sharing the results with the aviation industry and the public.

The center also continues its tradition of early approach and landing flight research and testing for new spacecraft. Through accomplishing dynamic flight research and sharing with industry, academia and other government communities, Armstrong is facilitating an understanding of aeronautics concepts and demonstrating the role that flight will play in the nation's future.

2017 12 14 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/0eimg8IMsGA> NASA Supersonic Flights Validate Flightworthiness for Future Schlieren Imaging NASA tests equipment for the schlieren imaging of future supersonic aircraft through the second series of Background Oriented Schlieren using Celestial Objects, or BOSCO II. Three cameras using hydrogen alpha filters were positioned on the ground to capture schlieren images of supersonic NASA and Air Force Test Pilot School aircraft flying in front of the sun. [Q](#)

Using the sun as a background allows researchers to observe the shockwaves coming off supersonic aircraft, which are heard as a sonic boom when they hit the ground. NASA's future Low Boom Flight Demonstration aircraft, or LBFD, will fly to demonstrate a quiet thump in place of the louder sonic boom typically associated with supersonic flight, or flying faster than the speed of sound.

LBFD will fly at high altitudes, and in order to be able to capture these images in flight, NASA will have to outfit a chase aircraft with the proper imaging tools and equipment, and will capture images from a close range relative to previous flights. BOSCO II validated NASA's ability to capture closer range images with smaller equipment.

2017 12 12 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/Z1lfiUpPGE> X-56 Return to Flight X-56A flew with a flexible wing configuration at NASA's Armstrong Flight Research Center in California on August 31. The flight demonstrated that previous challenges present during takeoff and landing were resolved, and the revised flight controller and updated theoretical models provided stable and good handling qualities. X-56 research flights seek to demonstrate enabling advanced control technologies for active suppression of a destructive vibration known as flutter on aircraft with highly flexible, lightweight wings. [Transcript Link](#)

2017 12 08 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/weRpZB3lojc> SNC's Dream Chaser Achieves Successful Free Flight at NASA Armstrong Sierra Nevada Corporation's Dream Chaser® spacecraft underwent a successful free-flight test on November 11, 2017 at NASA's Armstrong Flight Research Center, Edwards, California. The test verified and validated the performance of the Dream Chaser in the critical final approach and landing phase of flight, meeting expected models for a future return from the International Space Station. [Q](#)

The full-scale Dream Chaser test vehicle was lifted to 12,400 feet altitude by a 234-UT Chinook helicopter, released and flew a pre-planned flight path ending with a successful autonomous landing.

2017 12 07 NASA Armstrong Flight Research Center <https://youtu.be/bKWMXTo7Td0> Wake Surfing (Extended Cut)- Automated Cooperative Trajectories- Programmable Autopilot NASA's Armstrong Flight Research Center in California tested new technologies and methods that may help aircraft identify and avoid, or even ride, the wakes created by other aircraft. The Automated Cooperative Trajectories Programmable Autopilot flights, or ACT-PA, involved research flights of a Gulfstream III testbed to research the potential for increased fuel efficiency. [Q](#)

2017 12 04 NASA Armstrong Flight Research Center <https://youtu.be/70YRLSYmL7U> Wake Surfing- Automated Cooperative Trajectories- Programmable Autopilot NASA's Armstrong Flight Research Center in California tested new technologies and methods that may help aircraft identify and avoid, or even ride, the wakes created by other aircraft. The Automated Cooperative Trajectories Programmable Autopilot flights, or ACT-PA, involved research flights of a Gulfstream III testbed to research the potential for increased fuel efficiency. [Q](#)

2017 11 20 NASA Armstrong Flight Research Center <https://youtu.be/v1J26t9sUgA> NASA Community College Aerospace Scholars, Fall 2017 Armstrong Flight Research Center Office of Education participated in hosting the national community college program known as NASA Community College Aerospace Scholars (NCAS) for fall 2017. NCAS is designed to inspire students to pursue majors within STEM, transfer to a 4-year university, and ultimately graduate with a 4-year degree in a STEM-related field. [Transcript Link](#)

In this 3-minute, 50-second video, community college students from around the country participate in NCAS through a 4-day MARS Lego Rover competition at NASA's Armstrong Flight Research Center's Office of Education at the AERO Institute in Palmdale, CA. The competition serves as a workshop where students integrate how a real NASA project would be organized with designated roles that include: a project manager, specialized engineers, procurement, and marketing managers.

2017 10 11 NASA Armstrong Flight Research Center <https://youtu.be/gdnp3iC9LU4> "X-Planes Discovery Through Flight" Video - New Concepts & Configurations (Subscale X-Planes) "X-Planes: Discovery Through Flight" Video - New Concepts & Configurations (Subscale X-Planes) HiMAT, X-36, X-38, X-40, X-43 Hyper-X, X-45, X-48 BWB (Blended Wing Body), X-56 MUTT (Multi-Use Technology Testbed) [0](#)

AIAA Flight Test Technical Committee

AIAA AVIATION 2017 Denver, Colorado

Forum 360: "X-Planes: Discovery Through Flight"

Moderator: Starr Gin, Chair Flight Test Technical Committee

Related Webcast Link of Conference Panel Discussion:  
<https://livestream.com/AIAAvideo/AVIATION2017/videos/157619965>

2017 10 11 NASA Armstrong Flight Research Center <https://youtu.be/0eJgJ7jtPEA> "X-Planes Discovery Through Flight" Video - Derivative Experimental & Research Aircraft (Testbeds) "X-Planes: Discovery Through Flight" Video - Derivative Experimental & Research Aircraft (Testbeds) F-8 SCW (Supercritical Wing), F-8 DFBW (Digital Fly By Wire), AD-1, F-111 MAW (Mission Adaptive Wing), F-18 HARV (High Alpha Research Vehicle), Flight Test Fixture F-104 & F-15, F-15 ACTIVE, [0](#)

Low Boom Flight Technology Build Up F-16XL – F-5E SSBE (Shaped Sonic Boom Experiment) – F-15 Quiet Spike

AIAA Flight Test Technical Committee

AIAA AVIATION 2017 Denver, Colorado

Forum 360: "X-Planes: Discovery Through Flight"

Moderator: Starr Gin, Chair Flight Test Technical Committee

Related Webcast Link of Conference Panel Discussion:  
<https://livestream.com/AIAAvideo/AVIATION2017/videos/157619965>

2017 10 11 NASA Armstrong Flight Research Center <https://youtu.be/oPRj5rpe2RQ> "X-Planes Discovery Through Flight" Video - Exploratory Experimental Flight (X-Planes) "X-Planes: Discovery Through Flight" Video - Exploratory Experimental Flight (X-Planes) X-1, X-3, X-5, X-15, X-24, X-29, X-31, X-35, X-35C, X-35B, Low Boom Flight Demonstrator AIAA Flight Test Technical Committee AIAA AVIATION 2017 Denver, Colorado Forum 360: "X-Planes: Discovery Through Flight" Moderator: Starr Gin, Chair Flight Test Technical Committee

Related Webcast Link of Conference Panel Discussion:  
<https://livestream.com/AIAAvideo/AVIATION2017/videos/157619965>

2017 10 10 NASA Armstrong Flight Research Center <https://youtu.be/tPqsWgEggBc> The First Man on the Moon Why Neil Armstrong " Dr. James Hansen August 3, 2017 "The First Man on the Moon: Why Neil Armstrong?" Dr. James Hansen NASA Armstrong Flight Research Center, Edwards California

Of all the Apollo astronauts, why was Neil Armstrong chosen to command Apollo 11 and also become the first astronaut to step out onto the lunar surface? In the process of answering this question, Dr. Hansen also examined important aspects of Armstrong's life story, a life that began quietly in small-town America and developed into his celebrated career as a naval aviator, aeronautical engineer, test pilot, and pioneering astronaut. Dr. Hansen explores the question of the complex legacy left by this reluctant hero and first man on the Moon.

Speaker: Dr. James Hansen

FIRST MAN (Simon & Schuster, 2005, 2012) by Dr. James Hansen is the only authorized biography of Neil Armstrong, first man on the Moon. The book spent three weeks as a New York Times Bestseller and garnered major book awards including the AIAA's Eugene E. Emme Astronautical Prize, American Institute of Aeronautics and

2017 10 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kD4aJYnLB8">https://youtu.be/kD4aJYnLB8</a>	Convective Processes Experiment	<p>During June 2017, a team of NASA and university scientists conducted the Convective Processes Experiment, also known as CPEX. Using a suite of instruments on board NASA's DC-8 flying laboratory, scientists collected data on wind, temperature and humidity around the subtropical waters of Florida.</p> <p>Data collected from the CPEX mission will advance understanding of the atmosphere and help improve the accuracy of weather and climate models.</p> <p>For more information on CPEX visit <a href="http://www.nasa.gov/earthex">www.nasa.gov/earthex</a>.</p>	<a href="#">Transcript Link</a>
2017 09 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nU7Sn98W_xY">https://youtu.be/nU7Sn98W_xY</a>	Dream Chaser Completes Captive Carry Test at NASA Armstrong	<p>Sierra Nevada Corporation's Dream Chaser completed an important milestone toward orbital flight on Wednesday, Aug. 30, with a successful captive carry test at NASA's Armstrong Flight Research Center in California, located on Edwards Air Force Base. A helicopter successfully carried a Dream Chaser test article, which has the same specifications as a flight-ready spacecraft, to the same altitude and flight conditions of an upcoming free flight test.</p> <p>The captive carry is part of a series of tests for a developmental space act agreement SNC has with NASA's Commercial Crew Program. The data from the tests help SNC validate the aerodynamic properties, flight software and control system performance of the Dream Chaser.</p> <p>The Dream Chaser is a lifting-body, winged spacecraft that will fly back to Earth in a manner similar to NASA's space shuttles. The successful captive carry test clears the way for a free flight test of the spacecraft later this year in which the uncrewed Dream Chaser will be released to glide on its own and land.</p> <p>The test campaign will also help finalize the design for cargo version of the Dream Chaser in preparation for the spacecraft to deliver cargo to the International Space Station under NASA's Commercial</p>	<a href="#">Transcript Link</a>
2017 09 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Dj_ILFP-SGc">https://youtu.be/Dj_ILFP-SGc</a>	NASA's Lesa Roe Talks Eclipse with Thomas Zurbuchen	<p>Lesla Roe, acting NASA deputy administrator, and Thomas Zurbuchen, NASA science mission directorate's associate administrator, discuss their most notable experiences from the 2017 Solar Eclipse. Roe and Zurbuchen were passengers aboard NASA's Armstrong Flight Research Center Gulfstream III aircraft, which flew 35,000 feet above the coast of Oregon during this phenomenal event.</p>	<a href="#">Transcript Link</a>

2017 09 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cGzuHFwpD8o">https://youtu.be/cGzuHFwpD8o</a>	Total Eclipse From Onboard NASA's G-III Research Aircraft	As the 2017 solar eclipse approaches and enters totality, NASA Armstrong staff and NASA senior management share their excitement and first-hand experience from aboard NASA's Armstrong Flight Research Center Gulfstream III aircraft. The G-III aircraft flew at 35,000 feet above the coast of Oregon during the 2017 total solar eclipse, capturing some of the very first views of the 2017 total solar eclipse as it made its way across the United States.	<a href="#">Transcript Link</a>
2017 09 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/leV6nb3c7Pg">https://youtu.be/leV6nb3c7Pg</a>	NASA's 2017 Solar Eclipse Coverage from 35,000 feet	Robert Lightfoot, NASA's acting administrator, and Thomas Zurbuchen, NASA science mission directorate's associate administrator, discuss the importance and scientific value of capturing the 2017 Solar Eclipse from 35,000 feet above the coast of Oregon aboard the agency's Gulfstream III aircraft.	<a href="#">Transcript Link</a>
2017 08 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/du4xU4YftM">https://youtu.be/du4xU4YftM</a>	Dream Chaser Rolls Through Tow Tests at NASA Armstrong	In this 2-minute, 41-second video, Sierra Nevada Corporation (SNC) puts its Dream Chaser engineering test vehicle through a series of ground tests at NASA's Armstrong Flight Research Center at Edwards Air Force Base, CA, to prepare for upcoming captive-carry and free-flight tests later this year.  During this 60-mph tow test, a pickup truck pulled the Dream Chaser test vehicle on Edward's runway to validate the performance of the spacecraft's nose skid, brakes, tires, and other systems. The company has performed the tests at 10 mph, 20 mph, and 40 mph over the last few months to lead up to the 60-mph runway test. Range and taxi tow tests are standard for winged vehicles that touchdown on a runway to prove the overall spacecraft handling post-landing.	<a href="#">Transcript Link</a>
2017 08 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9XeO9huF69E">https://youtu.be/9XeO9huF69E</a>	NASA's Armstrong Flight Research Center G-III Captures Eclipse Umbra	From aboard NASA's Armstrong Flight Research Center G-III aircraft, this wide angle video of the moon's umbra was captured as they flew over the coast of Oregon, near Lincoln City at 35,00 feet during the eclipse.	<a href="#">0</a>

2017 08 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XOAtIwtYBok">https://youtu.be/XOAtIwtYBok</a>	G-III Aircraft from NASA Armstrong Provides Live TV Coverage of Solar Eclipse Across America	For the first time in 99 years, a total solar eclipse will cross the entire nation Monday, Aug. 21. A total solar eclipse occurs when the sun is completely obscured by the moon. The lunar shadow enters the United States near Lincoln City, Oregon, at 9:05 a.m. PDT. Totality, where the moon completely covers the sun, begins in Lincoln City around 10:16 a.m. PDT. During totality, there will be up to two and a half minutes of darkness.	<a href="#">Q</a>	
				The G-III aircraft was modified with upgraded windows and communications equipment to enable high-definition video to be streamed to NASA TV during the eclipse enabling citizen science. The aircraft will be flying at 25,000 feet over the coast of Oregon, near Lincoln City during the eclipse on August 21, 2017.		
2017 08 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EPDI1m-grml">https://youtu.be/EPDI1m-grml</a>	NASA Armstrong Flight Research Center FIRE UP THE FUTURE	This 2-minute, 40-second video shows how NASA's Armstrong Flight Research Center at Edwards Air Force Base, CA, continues to separate the real from the imagined through flight.	<a href="#">Transcript Link</a>	
				<p>Overcoming Barriers to Commercial Supersonic Flight – F/A-18, F-15</p> <p>Developing a Highly Autonomous System – BirdsEyeView Aerobotics FireFLY6 UAV</p> <p>Saving Fuel and Reducing Noise – G-III</p> <p>Using Collision Avoidance to Save Unconscious Fighter Pilot – F-16 HUD</p> <p>X-Plane Flight Demonstrators for New Technologies – Aurora D8, Boeing TTBW, Boeing BWB, Lockheed Martin HWB, Dzyne Technologies BWB</p> <p>Increasing Fuel Economy by “Surfing” Wake Vortex – C-20A</p> <p>Safely Integrating UAS Into the National Airspace – MQ-9 Ikhana UAS</p> <p>Researching Radical Aero Drag Reduction – Prandtl</p> <p>Testing Flexible Airframes – X-56A</p> <p>Validating Electric Propulsion Technology – X-57</p> <p>Low-Cost, Low-Risk Flight Testing Enabling Affordable Access to Space – Towed Glider Air-Launch System</p> <p>Preparing to Fly on Mars – Prandtl-M</p> <p>Supporting Orion Spacecraft Parachute Tests – Orion Capsule Parachute Assembly System (CPAS)</p> <p>Flight Opportunities for Private Industry – Masten Space Systems Inc., Mojave</p> <p>Probing the Universe from 40,000 Feet – SOFIA</p>		
2017 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/q13GsGMFJDU">https://youtu.be/q13GsGMFJDU</a>	F A-18 Autonomous Formation Flight (AFF) Test Over California's Mojave Desert	This 32-second video taken on November 9, 2001 shows an F/A-18 Autonomous Formation Flight (AFF) test over California's Mojave Desert.	<a href="#">Q</a>	
				Autonomous Formation Flight (AFF) is intended to allow an aircraft to fly in close formation over long distances using advanced positioning and controls technology. It utilizes Global Positioning System satellites and inertial navigation systems to position two or more aircraft in formation, with an accuracy of a few inches. This capability is expected to yield fuel efficiency improvements.		

2017 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ESdo6b8lwDc">https://youtu.be/ESdo6b8lwDc</a>	Two F A-18s in Autonomous Formation Flight	This 32 second video taken in September of 2001 shows two NASA F/A-18s performing a flight test over California's Mojave Desert during the Autonomous Formation Flight (AFF) program at Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript</a> <a href="#">Link</a>
				Autonomous Formation Flight (AFF) is intended to allow an aircraft to fly in close formation over long distances using advanced positioning and controls technology. It utilizes Global Positioning System satellites and inertial navigation systems to position two or more aircraft in formation, with an accuracy of a few inches. This capability is expected to yield fuel efficiency improvements.	
2017 08 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zzi5U9A3Q">https://youtu.be/zzi5U9A3Q</a>	Armstrong Interns Doing Big Things for NASA	Interns at NASA Armstrong Flight Research Center work on innovative projects developing new technologies that can change the world we live in. Armstrong interns are mentored by professionals who are passionate about developing these young, creative minds.	<a href="#">Transcript</a> <a href="#">Link</a>
				These hard-working students are making an impact at Armstrong, manifesting their value and contributions to NASA and all of aerospace.	
				Duration: 3:25	
2017 08 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ioXPPfsgqay">https://youtu.be/ioXPPfsgqay</a>	X-4 Bantam Performing a Flight Test Over Muroc, CA	This 1-minute, 3-second video taken in the 1950s shows the semi-tailless X-4 Bantam research aircraft performing a flight test at the NACA High-Speed Flight Research Unit in Muroc (now Edwards), CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				The X-4 was designed to test a semi-tailless wing configuration at transonic speeds. Many engineers believed in the 1940s that the such a design, without horizontal stabilizers, would avoid the interaction of shock waves between the wing and stabilizers. These were believed to be the source of the stability problems at transonic speeds up to Mach 0.9.	
				Two aircraft had already been built using a semi-wingless design - the rocket-powered Me-163 Komet flown by Germany in World War II, and the British de Havilland DH.108 Swallow build after the war. The Army Air Forces signed a contract with the Northrop Aircraft Company on June 11, 1946, to build two X-4s. Northrop was selected because of its experience with flying wing designs, such as the N9M, XB-35 and YB-49 aircraft.	
				The resulting aircraft was very compact, only large enough to hold two J30 jet engines, a pilot, instrumentation, and a 45-minute fuel supply. Nearly all maintenance work on the aircraft could be done without using a ladder or footstool. A person standing on the ground could easily look into the cockpit. For control without horizontal tail surfaces, the X-4 used combined elevator and aileron control surfaces (called elevons) for control in pitch and roll attitudes. The aircraft also had split flaps, which doubled as speed	

2017 08 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oRj6hu4QmCs">https://youtu.be/oRj6hu4QmCs</a>	NASA Aircraft Aids Earth-Mars Cave Detection Study	This 2-minute, 9-second video taken in April of 2011 features NASA's King Air aircraft flying a research mission over California's Mojave Desert where it captured both thermal and visual imagery to aid in the detection of hidden caves on the Earth, the moon and Mars. The research could contribute to the development of techniques that could identify suitable cave targets for future robotic exploration on the moon and Mars.	<a href="#">Transcript Link</a>
				Duration: 2:09 minutes Release Date: April 2011	
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/eiMR1k065rl">https://youtu.be/eiMR1k065rl</a>	Leland Melvin Updated on Dryden's Education Outreach	NASA Associate Administrator for Education Leland Melvin was updated on NASA Dryden's (now Armstrong) education outreach efforts when he met with the Center's education staff in early February 2013 at the AERO Institute in Palmdale, CA. The team along with the institute earned his praise for its recent founding of the Palmdale Aerospace Academy. Melvin also toured the nearby Dryden Aircraft Operations Facility (now Hangar 703) during his visit.	<a href="#">Transcript Link</a>
				Duration: 1:20 minutes	
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wcUf9QBU4ik">https://youtu.be/wcUf9QBU4ik</a>	MSL-Curiosity Bringing Mars Down to Earth at TNOTS	This 1-minute 24-second video taken August 2, 2012 shows NASA Mars program scientist Kelly Fast detailing the goals and complexities of NASA's Mars Science Laboratory and its Curiosity rover at the AERO Institute in Palmdale, California.	<a href="#">Transcript Link</a>
				More than 125 persons attended Fast's three presentations, with several hundred more visiting the related exhibits in the adjacent Aerospace Exploration Gallery at the AERO Institute.	
				Coming just three days before the anticipated landing of the Curiosity rover on Mars, Fast's three lively presentations detailed both the goals of the Mars Science Laboratory (MSL) and the challenges of getting Curiosity – which is the size of a small sport utility vehicle – safely on the surface of Mars.	
				To learn more visit: <a href="https://www.nasa.gov/centers/dryden/Features/fast_details_msl.html">https://www.nasa.gov/centers/dryden/Features/fast_details_msl.html</a>	

2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZmREmE04V3M">https://youtu.be/ZmREmE04V3M</a>	NASA Social Behind the Scenes at NASA Dryden	More than 50 followers of NASA's social media websites went behind the scenes at NASA's Dryden Flight Research Center during a "NASA Social" on May 4, 2012. The visitors were briefed on what Dryden is and does by center management, project engineers and technicians, toured various facilities, viewed research and support aircraft, and even had their photos taken in the cockpit of a NASA F/A-18.	<a href="#">Transcript</a> <a href="#">Link</a>
				Duration 1:09 minutes	
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bgpuA3dr8b8">https://youtu.be/bgpuA3dr8b8</a>	Star Trek's Lt. Uhura's Warp- Speed Visit to Dryden	This 1-minute 36-second video taken on January 10, 2012 shows highlights of actress Nichelle Nichols visit to NASA Dryden Flight Research Center (now Armstrong).  Actress Nichelle Nichols warped to many worlds as Lt. Uhura in the 1960s Star Trek TV show. However, her real-life adventures have taken her to where no one has gone before in advocacy for NASA and helping to encourage women and multi-cultural persons to apply to become astronaut candidates. Nichols spoke about some of her experiences during a visit to NASA's Dryden Flight Research Center.	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/lywIMmJY-To">https://youtu.be/lywIMmJY-To</a>	Middle School Girls Learned About Aerospace During a Tech Trek Tour of Dryden.	This 42-second video taken March 18, 2009 shows middle school girls learning about aerospace during a Tech Trek tour of Dryden Flight Research Center (now Armstrong) in California's Mojave Desert. Some of the tour highlights included a look inside NASA's 747 Shuttle Carrier Aircraft, flying simulators and a close up view of a high altitude pilot's suit.	<a href="#">0</a>
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4D9rBbTPhGM">https://youtu.be/4D9rBbTPhGM</a>	High School Teams Show Off Their 2012 FIRST Competition Robots	This 1-minute 19-second video taken February 17, 2012 shows robotics teams from Lancaster and Antelope Valley High Schools in Lancaster, California demonstrating the prowess of their robots built for the 2012 FIRST Robotics Competition during spring rollout ceremonies.  The robots showed off their ability to shoot basketballs into hoops and balance on a tilting bridge, the two main tasks in the FIRST 2012 "Rebound Rumble" game. NASA Dryden Flight Research Center (now Armstrong) co-sponsored three teams from Lancaster, Antelope Valley and Tehachapi High Schools in the annual FIRST Robotics Competition, and also co-sponsored several teams in the related FIRST Tech Challenge competition.	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rREcUxJ8s1U">https://youtu.be/rREcUxJ8s1U</a>	Gordon Fullerton and Pete Knight Honored With Bobblehead Dolls at Lancaster Jethawks Baseball Game	This 50-second video from August 13, 2004 shows Gordon Fullerton signing autographs and being honored at a baseball game.  NASA research pilot and former astronaut C. Gordon Fullerton, along with the late California state senator and record-setting test pilot William J. "Pete" Knight, were honored with the production of 2,000 "bobblehead" dolls in their likenesses by the Lancaster Jethawks professional baseball team.  The bobbleheads were given away to the first 2,000 fans attending the Class A California League game between the Jethawks and the Modesto A's at the Lancaster Municipal Stadium, nicknamed "The Hangar," on Aug. 13, 2004.  To learn more visit: <a href="https://www.nasa.gov/centers/dryden/news/Features/2004/fullerton-bobblehead.html">https://www.nasa.gov/centers/dryden/news/Features/2004/fullerton-bobblehead.html</a>	<a href="#">0</a>
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2_T3XqO9kNA">https://youtu.be/2_T3XqO9kNA</a>	NASA Dryden Engineer Kevin Walsh Training for Race Across America	This 50-second video from June of 2005 shows NASA Dryden engineer Kevin Walsh training for the 3,000 bicycle "Race Across America".  On June 19, the 47-year old aeronautical propulsion engineer at NASA's Dryden Flight Research Center (now Armstrong) at Edwards, California was one of 26 solo riders who faced the daunting task of covering the almost 3,000-mile course in 12 days or less.  To learn more visit: <a href="https://www.nasa.gov/centers/dryden/news/NewsReleases/2005/05-42.html">https://www.nasa.gov/centers/dryden/news/NewsReleases/2005/05-42.html</a>	<a href="#">0</a>
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/hwcrW_Ble3w">https://youtu.be/hwcrW_Ble3w</a>	Former NASA Research Pilot Ed Schneider Aerospace Walk of Honor Induction Ceremony.	This 49-second video from September of 2005 shows former NASA Research pilot Ed Schneider being inducted into the Aerospace Walk of Honor in Lancaster, California.	<a href="#">0</a>
2017 07 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/NgVUQMj918g">https://youtu.be/NgVUQMj918g</a>	Former NASA Research pilot Ed Schneider Aerospace Walk of Honor Induction Ceremony Comments.	This 1-minute 17-second video from September of 2005 features comments by former NASA Research pilot Ed Schneider following his induction ceremony for the Aerospace Walk of Honor in Lancaster, California.	<a href="#">0</a>

2017 07 27 NASA  
Armstrong  
Flight  
Research  
Center [https://youtu.be/Zhlpai\\_p32hc](https://youtu.be/Zhlpai_p32hc) NASA Engineer  
Starr Ginn Speaks  
About Cutting-  
Edge  
Technologies at  
NASA This 43-second video released on March 25, 2007 features NASA  
Engineer Starr Ginn speaking about about her love for working on  
cutting-edge technologies at NASA. [0](#)

2017 07 27 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/4zuiNZp1UCU> NASA Engineer  
Starr Ginn Speaks  
About the  
Inspirational  
Women That  
Influenced Her  
NASA Career This 34-second video released on March 25, 2007 features NASA  
Engineer Starr Ginn speaking about the women in her life that  
influenced her NASA career choice. [0](#)

2017 07 27 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/Q9s76AAkfJQ> NASA Engineer  
Starr Ginn Speaks  
About the  
Historical  
Obstacles  
Encountered by  
Women in  
Engineering. This 36-second video released on March 25, 2007 features NASA  
Engineer Starr Ginn speaking about the historical obstacles  
encountered by women in engineering. [0](#)

2017 07 26 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/cFPcp9s1Y-4> Breaking the  
Mishap Chain  
Promotional Video "Breaking the Mishap Chain," written by Peter Merlin, Dr. Gregg  
Bendrick and Dwight Holland and published in 2012 as part of in  
NASA's Aeronautics Book Series, details human factors involved in  
accidents and incidents in aerospace research, flight test and  
development. This promotional video features comments from  
Bendrick about the case studies and chain of events that led to  
these mishaps. [Transcript](#)  
[Link](#)

Duration: 56 seconds  
Date Produced: October 3, 2012

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/eJVsqk6e94M">https://youtu.be/eJVsqk6e94M</a>	Solid Rocket Boosters Arrive at Dryden for Storage	Two Space Shuttle solid rocket booster (SRB) casings arrived at NASA's Dryden (now Armstrong) Flight Research Center on August 29, 2012 after a transcontinental trip from the Kennedy Space Center in Florida. The insert boosters, each of which is more than 120 feet long and 12 feet wide, were hauled overland by a modified tractor-trailer rig.  Now owned by the California Science Center in Los Angeles, they will remain in storage at NASA Dryden until the science center's planned exhibit hall to house the Space Shuttle Endeavour is built. The boosters will be mounted alongside Endeavour in a vertical configuration, similar to what they would have been prior to launch into space.	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/iUxtgk1tY">https://youtu.be/iUxtgk1tY</a>	AREES 2012 Learning About NASA Earth Science Research	Teachers from around the country recently gathered at NASA's Dryden Aircraft Operations Facility and the AERO Institute in Palmdale, Calif., to participate in NASA's Airborne Research Experiences for Educators and Students (AREES) workshops. For two weeks, the educators focused on NASA's Earth science and flight research missions, how engineers integrate specialized science instruments into aircraft for monitoring terrestrial changes and participated in a simulated NASA ER-2 Earth science mission.  Duration: 1:38 min Date Produced: July 2012	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3zGGLW3afg">https://youtu.be/3zGGLW3afg</a>	Three, Two, One - Launch! Launch! Launch!	On June 1, 2011, hundreds of fourth-through-sixth grade students from the California high desert communities of Mojave and California City participated in the seventh annual Intermediate Space Challenge rocket contest at the Mojave Air and Space Port. The challenge introduced science, technology, engineering and math through the hands-on experience of building and launching a rocket.	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/HpBjgQIKIWM">https://youtu.be/HpBjgQIKIWM</a>	Lori Losey - The Woman Behind the Video Camera	The often-spectacular aerial video imagery of NASA flight research, airborne science missions and space satellite launches doesn't just happen. Much of it is the work of Lori Losey, senior video producer and aerial videographer at NASA's Dryden Flight Research Center (now Armstrong). Losey has traveled the world for two decades, much of the time in the back seat of high-performance aircraft, videocam to her eye.  Duration 3:35 min Production Date: March 2011	<a href="#">Transcript Link</a>

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mHnKykpbrDo">https://youtu.be/mHnKykpbrDo</a>	Paul Bikle's Record Altitude Sailplane Flight	On a cold and windy February afternoon 50 years ago, the late Paul Bikle, then director of NASA's Flight Research Center (now Armstrong), soared into the stratosphere with one goal in mind - a world altitude record for unpowered sailplanes. Less than two hours later, Bikle and his Schweizer 1-23E sailplane had reached an altitude of 46,267 feet - a remarkable record that would stand for 25 years.	<a href="#">Transcript Link</a>
				Duration: 2:07 min Date of Production: March 2011	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gsfJi13wloc">https://youtu.be/gsfJi13wloc</a>	Going Green the Bohn-Meyer Math-Science Odyssey	More than 200 seventh-graders recently experienced a variety of hands-on learning activities during the 2011 Bohn-Meyer Math and Science Odyssey at Antelope Valley College in Lancaster, California. Students from eight area middle schools attended workshops led by professionals from NASA Dryden Flight Research Center (now Armstrong), Antelope Valley College and Lockheed Martin in the fields of engineering, meteorology, physics, chemistry and mathematics.	<a href="#">Transcript Link</a>
				The Math-Science Odyssey is named for the late Marta Bohn-Meyer, former chief engineer at NASA Dryden who was a regular participant in the event. Her husband, Bob Meyer, NASA's program manager for the SOFIA flying observatory, challenged attendees to focus on math and science classes that could lead to rewarding careers in engineering and technology.	
				(SOUND BITE - Meyer -- :25): "...You have a real opportunity today. Take advantage of it. Walk around, learn, talk to people that are here today that have gone down the path before you. You've probably heard the saying, "when opportunity knocks, open the door." Well, Marta liked to modify that a bit and said, "When opportunity knocks, open the door... but don't forget to walk through it." Aim high, as your attitude in life will determine the altitude you'll achieve, just like in aviation." The odyssey featured a series of three workshops focused on engineering and science, medical technology and environmental or "green" technologies, as well as hands-on activities and aircraft life-support equipment	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XknP98kZ6CQ">https://youtu.be/XknP98kZ6CQ</a>	Dodge Charger Safety Chase Car Assisting With an ER-2 Landing	This 1-minute, 49-second video taken January 20, 2011 in Palmdale CA shows NASA's ER-2 coming in for a landing and a 2010 Dodge Charger safety chase car escorting the aircraft to a safe landing. The safety chase car is being driven by an experienced ER-2 pilot and it can be seen charging down the runway in a high-speed chase of the ER-2.	<a href="#">Transcript Link</a>
				NASA's Dryden (now Armstrong) Flight Research Center maintains and operates the ER-2, which is based at Hangar 703 in Palmdale.	
				Communicating with the aircraft pilot, the safety chase car pilot calls out the distance in feet from the landing gear to the runway to help the pilot make a smooth landing.	
				To learn more visit: <a href="https://www.nasa.gov/centers/dryden/Features/ER-2_Charger.html">https://www.nasa.gov/centers/dryden/Features/ER-2_Charger.html</a>	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Zp9d8F8lpX0">https://youtu.be/Zp9d8F8lpX0</a>	NASA Dryden Aircraft and Exhibits at Edwards AFB 2005 Open House	This 2-minute, 26-second video from October of 2005 shows a variety of aircraft displayed by NASA Dryden Flight Research Center (now Armstrong) at the 2005 Edwards Airshow and Open House.	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Fcz2DKpF4iE">https://youtu.be/Fcz2DKpF4iE</a>	Celebrating One Hundred years of Powered Flight 1903 - 2003	Aerospace and aviation artist Dr. Robert T. McCall discusses some of the motivating factors, events and achievements that lead to the creation of his "Celebrating One Hundred years of Powered Flight" mural that is on display at NASA Dryden Flight Research Center in Southern California.  Duration: 57 seconds Circa: 2003	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RqBD4Jv1RYo">https://youtu.be/RqBD4Jv1RYo</a>	E-2C Hawkeye Loads Calibration Tests	This 36-second video from March of 2005 shows a U.S. Navy E-2C Hawkeye undergoing loads calibration tests in NASA Dryden Flight Research Center's (now Armstrong) Flight Loads Laboratory. After the results of the tests, loads equations were developed to assist the Navy in determining how the aircraft would respond to the added weight of planned modifications.	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3mmf3ne2j5o">https://youtu.be/3mmf3ne2j5o</a>	NASA Dryden Marks 60 Years of Exploring the Unknowns of Flight	Dryden marked its 60th anniversary as the nation's premier high-speed, high-altitude flight test and aerospace research facility during September 2006. This 40-second video clip was produced by "This Week at NASA" and first broadcast September 29, 2006.	<a href="#">Transcript Link</a>

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Mi5l8882l8k">https://youtu.be/Mi5l8882l8k</a>	Aerial Views of NASA Dryden Flight Research Center	This 23-second video shows aerial views from the 1960s of Rogers Dry Lake, the lakebed runways, the flightline and the buildings at NASA Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript Link</a>
				The Dryden Flight Research Center, NASA's premier installation for aeronautical flight research, celebrated its 50th anniversary in 1996. Dryden is the "Center of Excellence" for atmospheric flight operations. The Center's charter is to research, develop, verify and transfer advanced aeronautics, space and related technologies. It is located at Edwards, California, on the western edge of the Mojave Desert, 80 miles north of Los Angeles.	
				In addition to carrying out aeronautical research, the Center also supported the space shuttle program as a backup landing site and as a facility to test and validate design concepts and systems used in development and operation of the orbiters.	
				Dryden, a civilian tenant organization within the boundaries of Edwards Air Force Base, is on the northwest edge of Rogers Dry Lake, a 44-square-mile area used for aviation research and test operations since the 1930's. An additional 22 square miles of similar smooth clay surface is provided by nearby Rosamond Dry Lake. The desert environment provides good flying weather an average of 345 days a year, and the absence of large population centers throughout the high desert helps eliminate problems associated with aircraft noise and flight patterns.	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/CglUBKU3QYs">https://youtu.be/CglUBKU3QYs</a>	Chase Plane view of YF-17A Taking Off from Edwards Air Force Base	This 40-second video from 1976 shows the chase plane view of a YF-17A takeoff from Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				From May 27 to July 14, 1976, the Dryden Flight Research Center, (now Armstrong at Edwards, CA) flew the Northrop Aviation YF-17 technology demonstrator to test the high-performance U.S. Air Force fighter at transonic speeds. The objectives of the seven-week flight test project included the study of maneuverability of this aircraft at transonic speeds and the collection of in-flight pressure data from around the afterbody of the aircraft to improve wind-tunnel predictions for future fighter aircraft.	
				Also studied were stability and control and buffeting at high angles of attack as well as handling qualities at high load factors. Another objective of this project was to familiarize Center pilots with the operation of advanced high-performance fighter aircraft. During the seven-week program, all seven of the Center's test pilots were able to fly the aircraft with Gary Krier serving as project pilot.	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kYVnag0K1NA">https://youtu.be/kYVnag0K1NA</a>	NASA Researches the 'FaINT' Side of Sonic Booms	As the latest in a continuing progression of NASA's research projects on supersonics aimed at reducing or mitigating the effect of sonic booms, the Farfield Investigation of No Boom Threshold, or FaINT, flight research project at NASA Dryden Flight Research Center (now Armstrong) will help engineers better understand evanescent waves, an acoustic phenomenon that occurs at the very edges or just outside of the cone or envelope where sonic booms are heard.	<a href="#">Transcript Link</a>
				Duration: 2 minutes 23 seconds	
				Date: November 15, 2012	
				More information on sonic booms is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-016-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-016-DFRC.html</a>	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SHHD2Lafg28">https://youtu.be/SHHD2Lafg28</a>	Sonic Booms on Big Structures	In October of 2010, NASA conducted flight experiments at Edwards Air Force Base in Southern California to examine the effect of low-amplitude sonic booms on large office buildings. As part of the Sonic Booms On Big Structures effort, two NASA F/A-18 aircraft from NASA's Dryden Flight Research Center (now Armstrong) flew a series of supersonic runs that caused multiple sonic booms of varying intensity over Edwards.	<a href="#">Transcript Link</a>
				Duration: 4:34 minutes	
				More information on sonic booms is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-016-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-016-DFRC.html</a>	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/px7Xr1oyHkU">https://youtu.be/px7Xr1oyHkU</a>	PIK-20E Powered Glider Research	This 42-second video taken in 1991 shows the PIK-20E Sailplane landing at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				NASA 803 was the designation of this PIK-20E sailplane flown at NASA's Dryden Flight Research Center (now Armstrong) at Edwards, CA, between 1981 and 1991. It was used as a research aircraft on projects calling for high lift-over-drag and low-speed performance. In recent years, NASA 803 had been used to study the flow of fluids over the aircraft's surface at various speeds and angles of attack as part of a study of air-flow efficiency over lifting surfaces.	
				The single-seat aircraft, with a wingspan of just under 50 feet, was used to develop procedures to collect sailplane glide performance data in a project carried out by Dryden for the Soaring Society of America. It was also used to develop control systems for remotely piloted vehicles, for stall-spin and wake vortex studies, and to study high-lift aerodynamics and laminar flow on high-lift airfoils.	
				NASA 803, built by Eiri-Avion in Finland, was a fiberglass sailplane with a two-cylinder 54-hp engine. In this unique configuration, it took off and climbed to altitude on its own. The engine was then shut down and folded back into the fuselage and the aircraft was then operated as a conventional sailplane.	
				The construction of the PIK-20 series was rather unique. The factory used high-temperature epoxies cured in an autoclave, making the structure resistant to deformation with age. Unlike today's practice	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UhfQpAViOLs">https://youtu.be/UhfQpAViOLs</a>	PHYSX Thermal Ground Test of Pegasus Glove	This 36-second video taken in 1995 shows the Thermal Ground Test of the Pegasus Glove Two at Dryden Flight Research Center (now Armstrong) in Edwards, CA.	<a href="#">Transcript Link</a>
				Pegasus Hypersonic Experiment (PHYSX) gloves were manufactured for the project - one that flew aboard the Pegasus booster rocket and one earmarked for thermal ground tests. Both gloves were made of nickel-plated steel.	
				The experiment, which flew successfully on October 22, 1998, consisted of a smooth, information-gathering "glove" installed on the first-stage wing of the Pegasus Space Launch Vehicle, which reaches speeds of Mach 8 and altitudes of 200,000 feet. Instrumentation on the glove gathered more than 90 seconds of hypersonic temperature, pressure, and airflow data after the Pegasus booster was launched from an Orbital Sciences Corporation, Dulles, VA, L-1011 aircraft. The glove was bonded to the right wing and wrapped from the underside of wing, over the leading edge and onto the upper side, although it did not cover the wing completely.	
				The experiment gathered information about how the air flows over the Pegasus wing. Scientists were particularly interested in the transition of air from smooth (laminar) to turbulent flow. The objective of the experiment was to discover when the airflow over the wing becomes turbulent and why.	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RsOXD3R1Fy4">https://youtu.be/RsOXD3R1Fy4</a>	Paresev Air Tow from Rogers Dry Lake	This 25-second video from the early 1960's shows the Paraglider Research Vehicle (Paresev) lifting off with an air tow from Rogers Dry Lake in California's Mojave Desert.	<a href="#">Transcript Link</a>
				The Paresev (Paraglider Research Vehicle) was an indirect outgrowth of kite-parachute studies by NACA Langley engineer Francis M. Rogallo. In early 1960's the "Rogallo wing" seemed an excellent means of returning a spacecraft to Earth. The delta wing design was patented by Mr. Rogallo. In May 1961, Robert R. Gilruth, director of the NASA Space Task Group, requested studies of an inflatable Rogallo-type "Parawing" for spacecraft. Several companies responded; North American Aviation, Downey, CA, produced the most acceptable concept and development was contracted to that company. In November 1961 NASA Headquarters launched a paraglider development project, with Langley doing wind tunnel studies and the NASA Flight Research Center (now Armstrong) supporting the North American test program.	
				The North American concept was a capsule-type vehicle with a stowed "parawing" that could be deployed and controlled from within for a landing more like an airplane instead of a "splash down" in the ocean. The logistics became enormous and the price exorbitant, plus NASA pilots and engineers felt some baseline experience like building a vehicle and flying a Parawing should be accomplished first.	
				The Paresev was used to gain in-flight experience with four different	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RyWp5kFgm2M">https://youtu.be/RyWp5kFgm2M</a>	Paresev Low- Altitude Tow Test	This 56-second video taken in the early 1960's and shows the Paraglider Research Aircraft (Paresev) lifting off and then landing on the lakebed at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				<p>The Paresev was an indirect outgrowth of kite-parachute studies by NACA Langley engineer Francis M. Rogallo. In early 1960's the "Rogallo wing" seemed an excellent means of returning a spacecraft to Earth. The delta wing design was patented by Mr. Rogallo. In May 1961, Robert R. Gilruth, director of the NASA Space Task Group, requested studies of an inflatable Rogallo-type "Parawing" for spacecraft. Several companies responded; North American Aviation, Downey, CA, produced the most acceptable concept and development was contracted to that company. In November 1961 NASA Headquarters launched a paraglider development project, with Langley doing wind tunnel studies and the NASA Flight Research Center (now Armstrong) supporting the North American test program.</p> <p>The North American concept was a capsule-type vehicle with a stowed "parawing" that could be deployed and controlled from within for a landing more like an airplane instead of a "splash down" in the ocean. The logistics became enormous and the price exorbitant, plus NASA pilots and engineers felt some baseline experience like building a vehicle and flying a Parawing should be accomplished first.</p>	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d7xMZTWkz4o">https://youtu.be/d7xMZTWkz4o</a>	Paresev Aerial View From an On- board Camera	This 49-second video from 1962 and shows the Paraglider Research Vehicle (Paresev) lifting off from Edwards Air Force Base and then a view from the cockpit's on-board camera as it lands on Rogers Dry Lake.	<a href="#">Transcript</a> <a href="#">Link</a>
				<p>The Paresev was an indirect outgrowth of kite-parachute studies by NACA Langley engineer Francis M. Rogallo. In early 1960's the Rogallo Wing seemed to be an excellent means of returning a spacecraft to Earth. The delta wing design was patented by Mr. Rogallo. In May 1961, Robert R. Gilruth, director of the NASA Space Task Group, requested studies of an inflatable Rogallo-type "Parawing" for spacecraft. Several companies responded; North American Aviation, Downey, CA, produced the most acceptable concept and development was contracted to that company. In November 1961 NASA Headquarters launched a paraglider development project, with Langley doing wind tunnel studies and the NASA Flight Research Center (now Armstrong) supporting the North American test project.</p> <p>The North American concept was a capsule-type vehicle with a stowed "parawing" that could be deployed and controlled from within for a landing more like an airplane instead of a "splash down" in the ocean. The logistics became enormous and the price exorbitant, plus NASA pilots and engineers felt some baseline experience like building a vehicle and flying a Parawing should be accomplished first.</p>	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TfL6iyeH8OA">https://youtu.be/TfL6iyeH8OA</a>	PA-30 Twin Comanche Tail Flutter Test	This 23-second video taken April 5, 1966 shows the PA-30 Twin Comanche during a tail flutter test over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>After being purchased in 1967, NASA 808 was used as a testbed for general aviation flight control research. NASA's first project with the PA-30 was the determination of the aircraft's stability and control characteristics in the Langley full-scale wind tunnel. Engineers then correlated the wind tunnel measurements with in-flight measurements of the stability and control characteristics at NASA's Flight Research Center (now Armstrong). This was the first time full-scale wind tunnel measurements of a general aviation aircraft had been made since the late 1930's. As a result of the studies, several changes were made by the contractor to the aircraft to improve its flying qualities. These changes were manifested in later models of the airplane.</p> <p>Another project involving general aviation was the PA-30 project to define the operating techniques necessary to enable curved landing approaches as a part of routine operation at major airports. The project, in support of NASA's Short Take Off and Landing (STOL) project, was designed to facilitate large and small, STOL, and conventional aircraft using the same runway.</p> <p>In the early 1970's, the PA-30, serial number 30-1498, was used to test a flight technique used to fly Remotely Piloted Research Vehicles (RPRV's). The technique was first tested with the cockpit</p>		
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Zxe9sLIRuu0">https://youtu.be/Zxe9sLIRuu0</a>	Gossamer Albatross Rollout and Takeoff	This 28-second video from 1980 shows the Gossamer Albatross rolling out and taking off from Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>The Gossamer Albatross II was involved in slow-speed flight tests at the Dryden Flight Research Center (now Armstrong) at Edwards, CA in the spring of 1980.</p> <p>The original Gossamer Albatross is best known for completing the first completely human-powered flight across the English Channel on June 12, 1979. Dr. Paul MacCready was later awarded the most prestigious prize in American aviation, the Collier Trophy, for his work in the record breaking project.</p> <p>The Albatross II was the backup craft for the Channel flight. It was fitted with a small battery-powered electric motor and flight instruments for the NASA research project in low-speed flight. The minimal power required to fly this 94-foot-span aircraft suggested it could be solar-powered, and led to numerous later record breaking projects involving solar energy. NASA completed its flight testing of the Gossamer Albatross II and began analysis of the results in April, 1980.</p> <p>During the six-week program, 17 actual data gathering flights and 10 other flights were flown here as part of the joint NASA Langley/Dryden flight research project.</p>		

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/e0aaMWc8wXs> F-111 Integrated Propulsion Control System Aircraft Refueling by a KC-135 Tanker

This 31-second video from the mid-1970s shows the refueling of a NASA F-111 by an Air Force KC-135 tanker in the skies over California's Mojave Desert. [Q](#)

Over a span of about 23 years from 1967 to about 1990, records indicate around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. During this span, four areas of significant flight testing stand out.

The first tests occurred during the late 1960's when NASA worked on evaluating problems with the early F-111A (#63-9771 and #63-9777) for the Air Force and Navy. The early 1970's through the late 1980's brought the second and third phases of testing with an on-going effort to improve the F-111A (#63-9778).

The second phase called transonic aircraft technology (TACT/F-111A) added a highly efficient supercritical wing and later the third phase applied advanced wing (Mission Adaptive Wing-MAW) flight control technologies and was called Advanced Fighter Technology Integration (AFTI/F-111A).

The fourth effort, using an F-111E (#67-0115), ran from 1973 to 1976, and used an engine with an electronic control system (fly-by-wire) in place of the traditional hydro-mechanical system. This project called the integrated propulsion control system (IPCS) helped validate the Digital Electronic Engine Control (DEEC) concept.

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/ysjWJaIJPrQ> F-111 TACT Wing Sweep

This 31-second video from the mid-1980's was taken at Dryden Flight Research Center (now Armstrong) in California's Mojave Desert and it shows the wing sweep of the F-111 Transonic Aircraft Technology (TACT). [Transcript Link](#)

Over a span of about 23 years from 1967 to about 1990, records show around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. During this span, four areas of significant flight testing stand out.

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2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bZDf5bOGHdw">https://youtu.be/bZDf5bOGHdw</a>	F-111 TACT Landing on Runway at Edwards AFB	This 25-second video from the mid-1980's shows the F-111 Transonic Aircraft Technology (TACT) landing on the runway at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				Over a span of about 23 years from 1967 to about 1990, records show around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. During this span, four areas of significant flight testing stand out.	
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2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OxGw-g_zDDk">https://youtu.be/OxGw-g_zDDk</a>	F-111 TACT Landing on Runway at Edwards AFB	This 33-second video from the mid-1980's shows the F-111 Transonic Aircraft Technology (TACT) landing on the runway at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				Over a span of about 23 years from 1967 to about 1990, records show around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. During this span, four areas of significant flight testing stand out.	
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2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/c4HUI N1QYIc">https://youtu.be/c4HUI N1QYIc</a>	F-111 TACT Research Flight Over the Mojave Desert	This 35-second video from the mid-1980's shows an F-111 Transonic Aircraft Technology (TACT) during a research flight over California's Mojave Desert.	<a href="#">Transcript Link</a>
				Over a span of about 23 years from 1967 to about 1990, records show around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center, Edwards, CA. During this time span, four areas of significant flight testing stand out.	
				The first tests occurred during the late 1960's when NASA worked on evaluating problems with the early F-111A (#63-9771 and #63-9777) for the Air Force and Navy. The early 1970's through the late 1980's brought the second and third phases of testing with an on-going effort to improve the F-111A (#63-9778).	
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2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BosLE Goh22s">https://youtu.be/BosLE Goh22s</a>	F-111 TACT Taking Off From Edwards AFB	This 37-second video from the mid-1980's shows the F-111 Transonic Aircraft Technology (TACT) taking off from Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				Over a span of about 23 years from 1967 to about 1990, records show around six General Dynamic F-111 Aardvark aircraft at the NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. During this span, four areas of significant flight testing stand out.	
				The first tests occurred during the late 1960's when NASA worked on evaluating problems with the early F-111A (#63-9771 and #63-9777) for the Air Force and Navy. The early 1970's through the late 1980's brought the second and third phases of testing with an on-going effort to improve the F-111A (#63-9778).	
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2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/GtTtKc2Lzhs> NASA Quiet Sonic Boom Research Effort Ends With a Whisper The Waveforms and Sonic Boom Perception and Response (WSPR) project, flown by NASA Dryden Flight Research Center (now Armstrong), gathered data from a select group of more than 100 volunteer Edwards Air Force Base residents on their individual attitudes toward sonic booms produced by NASA F/A-18 aircraft in supersonic flight over Edwards. [Transcript Link](#)

WSPR's primary purpose was to develop data collection methods and test protocols for future public perception studies in communities that do not usually experience sonic booms.

Duration: 1:35

More information on Armstrong's work to mitigate sonic booms is found here:

<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-016-DFRC.html>

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/d2ug2khApW0> Flight Testing for Mars Dryden F-18 Flying Mars Science Laboratory Radar This 50-second video taken in June of 2011 shows a NASA F/A-18 stationed at Dryden Flight Research Center (now Armstrong) putting the Jet Propulsion Laboratory's Mars Science Laboratory landing radar to the test during recent flights over Edwards Air Force Base in California's Mojave Desert. [0](#)

With the test radar housed in a pod underneath its left wing, the F/A-18 made stair-step dives from 40,000 feet at angles of 40 to 90 degrees over Rogers Dry Lake to simulate what the radar will see during entry into the Martian atmosphere.

For more information on Dryden's support of the Mars Science Laboratory, go here:

<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-104-DFRC.html>

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3Ngjb_gF_gc">https://youtu.be/3Ngjb_gF_gc</a> NASA %23846 Pilot Proficiency Flight	This 60 second video taken August 19, 2005 shows NASA pilots undergoing a pilot proficiency flight in a dual seat F/A-18 Hornet (NASA #846) over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
			Pilots are required to fly a minimum number of hours per month to remain proficient. This film is from one such flight. In the footage, the pair of two-seat F-18 aircraft fly in formation. One of the aircraft lowers its landing gear for a slow speed flight. The two then head back to Dryden.	
			The F-18 Hornet is used primarily as a safety chase and mission support aircraft at NASA's Dryden Flight Research Center (now Armstrong) at Edwards, California. The formal designation of the aircraft is F/A-18, corresponding to the dual fighter-attack role of the Hornets in the U.S. Navy and U.S. Marine Corps. The aircraft were obtained from the U.S. Navy between 1984 and 1991. One has a two-seat cockpit while the others are single-seat aircraft. As support aircraft, the F-18's are used for safety chase, pilot proficiency, aerial photography and other mission support functions. Photography -- still, motion pictures, and videotape -- is used extensively by aeronautical engineers to monitor and verify various aspects of the research project.	
			The two-seat F-18 support aircraft is normally used for photo chase. It is configured to transmit live video pictures from the air back to Dryden so engineers can visually monitor the mission as it is being	
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9zxmK7sNATs">https://youtu.be/9zxmK7sNATs</a> F A-18 Formation Flight and Aerial Refueling with a KC-10 Tanker	This 61-second video taken August 19, 2005 shows an F/A-18 during a formation flight and aerial refueling mission with a KC-10 Tanker flight over California's Mojave Desert.	<a href="#">Transcript Link</a>
			The F-18 Hornet is used primarily as a safety chase and mission support aircraft at NASA's Dryden Flight Research Center (now Armstrong) at Edwards, CA. The formal designation of the aircraft is F/A-18, corresponding to the dual fighter-attack role of the Hornets in the U.S. Navy and U.S. Marine Corps. The aircraft were obtained from the U.S. Navy between 1984 and 1991. One has a two-seat cockpit while the others are single-seat aircraft. As support aircraft, the F-18's are used for safety chase, pilot proficiency, aerial photography, and other mission support functions. Photography -- still, motion pictures, and videotape -- is used extensively by aeronautical engineers to monitor and verify various aspects of research projects.	
			The two-seat F-18 support aircraft is normally used for photo chase. It is configured to transmit live video from the air back to Dryden so engineers can visually monitor the mission as it is being flown. This feature greatly enhances flight safety. As safety chase aircraft, F-18's, flown by research pilots, accompany research missions as another "set of eyes" to visually observe the research event, experiment or test to help make sure the flights are carried out safely. The chase pilots are in constant communication with the research pilots and mission control to report abnormalities that may be seen from the support aircraft.	

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1gbycNWXgrA">https://youtu.be/1gbycNWXgrA</a>	F A-18 FAST Offers Advanced Systems Test Capability	This 3-minute, 10-second video produced in December of 2010 discusses multiple advanced avionics projects flown by NASA's modified F/A-18A Full-scale Advanced Systems Test Bed (FAST) aircraft at Dryden Flight Research Center (now Armstrong) in California's Mojave Desert.	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/p2s-lpQGHFk">https://youtu.be/p2s-lpQGHFk</a>	NASA F A-18 %23853 IRAC Checkout Flight	<p>This 1-minute, 42-second video taken April 6, 2010 shows a checkout flight of a NASA F/A-18 full-scale advanced systems testbed over Edwards Air Force Base in California's Mojave Desert during the Integrated Resilient Aircraft Controls (IRAC) project. The project was flown by NASA's Dryden (now Armstrong) Flight Research Center.</p> <p>The Integrated Resilient Aircraft Control, or IRAC, project researched advances in aircraft flight control technology to provide on-board control resilience for ensuring safe flight in the presence of unforeseen, adverse conditions.</p> <p>The IRAC project examined state-of-the-art adaptive controls as a design option that could lead to improved stability and maneuverability margins for safe landing. While many IRAC studies focused on current and next-generation transport aircraft, project results also had applications for other aircraft types, as well as to the military and space sectors.</p> <p>IRAC research objectives included development of a set of validated, multidisciplinary, integrated aircraft control design tools and techniques to enable safe flight in the presence of adverse conditions such as structural damage, control surface failures, icing, or aerodynamic upsets. Carefully integrated math models were required to simulate the interactions among control inputs, flight navigation, aircraft structures, and propulsion systems.</p>	<a href="#">Transcript Link</a>
2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4VrVPgoBvTk">https://youtu.be/4VrVPgoBvTk</a>	Dryden Flight Projects Highlights - 2009- 10	NASA's Dryden Flight Research Center flew a wide variety of research, developmental and environmental science missions during the last half of 2009 and the first half of 2010. This 2 minute 45 second video montage depicts many of the unique and specialized aircraft, flight test projects and science missions flown by the center during the period.	<a href="#">Transcript Link</a>
				Duration: 2:45	

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/He2kEpoTW5E> Dryden Flight Projects Video - 2009 NASA's Dryden Flight Research Center (now Armstrong) flew a wide variety of research, developmental, and environmental science missions during 2009. [Transcript Link](#)

This video montage produced by the NASA Dryden video team depicts many of the unique and specialized aircraft, flight test projects and science missions flown by the Center during 2009 in support of NASA and other organizations' research goals.

Duration: 7:07

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/FD0o0OS1BtU> F-18A High Alpha Research Vehicle Phase III Strake Experiment This 23-second video taken in 1995 shows the F-18 High Alpha Research Vehicle (HARV) undergoing a Phase III Strake Experiment flight test over Edwards Air Force Base in California's Mojave Desert. [Transcript Link](#)

NASA's Dryden Flight Research Center (now Armstrong) at Edwards, CA, used an F-18A fighter aircraft as its High Angle-of-Attack (Alpha) Research Vehicle (HARV) in a three-phased flight research project lasting from April 1987 until September 1996. The aircraft completed 385 research flights and demonstrated stabilized flight at angles of attack between 65 and 70 degrees using thrust vectoring vanes, a research flight control system, and (eventually) forebody strakes (hinged structures on the forward side of the fuselage to provide control by interacting with vortices, generated at high angles of attack, to create side forces).

This combination of technologies provided carefree handling of a fighter aircraft in a part of the flight regime that was otherwise very dangerous. Flight research with the HARV increased NASA's understanding of flight at high angles of attack (angle of the wings with respect to the direction in which the aircraft was heading), enabling designers of U.S. fighter aircraft to design airplanes that will fly safely in portions of the flight envelope that pilots previously had to avoid.

To learn more about the F-18 High Alpha Research Vehicle (HARV) visit:  
<https://www.nasa.gov/centers/dryden/history/pastprojects/HARV/i>

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/SaZLExA-7Dc> F-16 Advanced Fighter Technology Integration Pre-Flight Preparations This 37-second video taken in 1982 shows the ground crew and pilot preparing for a test flight in an F-16 that was used for the Advanced Fighter Technology Integration (AFTI) project at Dryden Flight Research Center (now Armstrong). [Q](#)

The AFTI/F-16 project was a joint NASA/USAF effort evaluating advanced digital flight controls, automated maneuvering, voice-activated controls, sensors, and close-air support attack systems on a modified F-16. Research and test results could be applied to existing or future aircraft.

Originally conceived to explore flight control technology as well as various maneuvering concepts, this project was flown at Edwards Air Force Base. This F-16 was one of the original six F-16A airplanes that was modified extensively to study the feasibility of advanced technologies. It demonstrated the operational value of voice command and automated ground collision avoidance systems, an automated maneuvering system for all aspects of air and ground combat, an automated threat avoidance and terrain following system, and a night vision helmet with a dual forward-looking infrared capability that was pointed by movement of the pilot's head. All of these systems served to reduce the pilot's workload in the demanding and dangerous role of close-air support. These systems would help ensure that a pilot was more effective in a first pass over a low-level target in a battle area.

2017 07 26 NASA Armstrong Flight Research Center <https://youtu.be/pPCMWv-0eC4> F-16 AFTI Pilot Entry and Flight Preparation This 33-second video taken in 1982 shows a NASA pilot preparing for a flight in an F-16 that was used for the Advanced Fighter Technology Integration (AFTI) project at Dryden Flight Research Center (now Armstrong). [Transcript Link](#)

One of the most important technology spinoffs from the AFTI

This 33-second video taken in 1982 shows a NASA pilot preparing for a flight in an F-16 that was used for the Advanced Fighter Technology Integration (AFTI) project at Dryden Flight Research Center (now Armstrong).

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One of the most important technology spinoffs from the AFTI

2017 07 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/e58gcq6x3kM">https://youtu.be/e58gcq6x3kM</a>	F-16 Advanced Fighter Technology Integration Control Surface Check	This 53-second video taken in 1982 shows an F-16 undergoing pre-flight checkout of its control surfaces. The aircraft was used for the Advanced Fighter Technology Integration (AFTI) project at Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript Link</a>
				The AFTI F-16 project was a joint NASA/USAF effort evaluating advanced digital flight controls, automated maneuvering, voice-activated controls, sensors, and close-air support attack systems on a modified F-16. Research and test results could be applied to existing or future aircraft.	
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2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cvxwN7_X9j4">https://youtu.be/cvxwN7_X9j4</a>	F A-18 Active Aeroelastic Wing Takes off from Edwards AFB	One of the most important technology spinoffs from the AFTI  This 37-second video from 2003 shows a NASA F/A-18A taking off from Edwards Air Force Base in California's Mojave Desert for an Active Aeroelastic Wing (AAW) project mission.	<a href="#">Transcript Link</a>
				Active Aeroelastic Wing was a two-phase NASA/Air Force flight research project to investigate the potential of aerodynamically twisting flexible wings to improve maneuverability of high-performance aircraft at transonic and supersonic speeds, with traditional control surfaces such as ailerons and leading-edge flaps used to induce the twist. The project developed data and structural modeling techniques and tools to help design lighter, more flexible high aspect-ratio wings for future high-performance aircraft, which could translate to more economical operation or greater payload capability.	
				The project used a modified F/A-18A Hornet as its testbed aircraft, with wings that were modified to the flexibility of the original pre-production F-18 wing. Other modifications included a new actuator to operate the outboard portion of a divided leading-edge flap over a greater range and rate, and a research flight control system to host the aeroelastic wing control laws. The Active Aeroelastic Wing project was jointly funded and managed by the Air Force Research Laboratory and NASA Dryden Flight Research Center (now Armstrong), with Boeing's Phantom Works as prime contractor.	
				To learn more about NASA's F/A-18 Active Aeroelastic Wing visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-</a>	

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/VCX950weQgw">https://youtu.be/VCX950weQgw</a>	F A-18 AAW Performs High-Speed Rolls Over the Mojave Desert	<p>This 40-second video from 2003 shows a NASA F/A-18A Active Aeroelastic Wing (AAW) doing high-speed rolls during a AAW flight test over California's Mojave Desert.</p> <p>Active Aeroelastic Wing was a two-phase NASA/Air Force flight research program. The objective was to investigate the potential of aerodynamically twisting flexible wings to improve maneuverability of high-performance aircraft at transonic and supersonic speeds, with traditional control surfaces such as ailerons and leading-edge flaps used to induce the twist. The program developed data and structural modeling techniques and tools to help design lighter, more flexible high aspect-ratio wings for future high-performance aircraft, which could translate to more economical operation or greater payload capability.</p> <p>The program used a modified F/A-18A Hornet as its testbed aircraft, with wings that were modified to the flexibility of the original pre-production F-18 wing. Other modifications included a new actuator to operate the outboard portion of a divided leading edge flap over a greater range and rate, and a research flight control system to host the aeroelastic wing control laws. The Active Aeroelastic Wing Program was jointly funded and managed by the Air Force Research Laboratory and NASA Dryden Flight Research Center (now Armstrong), with Boeing's Phantom Works as prime contractor.</p> <p>To learn more about NASA's F/A-18 Active Aeroelastic Wing visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/o5TI8e90HQo">https://youtu.be/o5TI8e90HQo</a>	F A-18A Active Aeroelastic Wing Flight Test	<p>This 30-second video from March of 2005 shows a NASA F/A-18A Hornet undergoing an in-flight Active Aeroelastic Wing (AAW) test over the Mojave Desert at Edwards, CA.</p> <p>Active Aeroelastic Wing was a two-phase NASA/Air Force flight research project. The objective was to investigate the potential of aerodynamically twisting flexible wings to improve maneuverability of high-performance aircraft at transonic and supersonic speeds, with traditional control surfaces such as ailerons and leading-edge flaps used to induce the twist. The project developed data and structural modeling techniques and tools to help design lighter, more flexible high-aspect-ratio wings for future high-performance aircraft, which could translate to more economical operation or greater payload capability.</p> <p>The project used a modified F/A-18A Hornet as its testbed aircraft, with wings that were modified to the flexibility of the original pre-production F-18 wing. Other modifications included a new actuator to operate the outboard portion of a divided leading-edge flap over a greater range and rate, and a research flight control system to host the aeroelastic wing control laws. The Active Aeroelastic Wing project was jointly funded and managed by the Air Force Research Laboratory and NASA Dryden Flight Research Center (now Armstrong), with Boeing's Phantom Works as prime contractor.</p> <p>To learn more about NASA's F/A-18 Active Aeroelastic Wing visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-061-</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gFWy05hppE">https://youtu.be/gFWy05hppE</a>	Time-Lapsed Video of F A-18A AAW Wing Loads Test	<p>This 53-second time-lapsed video from 2000 shows a NASA F/A-18A undergoing an Active Aeroelastic Wing (AAW) Wing Loads Test at Dryden Flight Research Center's (now Armstrong) Flight Loads Lab.</p> <p>Active Aeroelastic Wing was a two-phase NASA/Air Force flight research project. The object was to investigate the potential of aerodynamically twisting flexible wings to improve maneuverability of high-performance aircraft at transonic and supersonic speeds, with traditional control surfaces such as ailerons and leading-edge flaps used to induce the twist. The project developed data and structural modeling techniques and tools to help design lighter, more flexible high-aspect-ratio wings for future high-performance aircraft, which could translate to more economical operation or greater payload capability.</p> <p>The project used a modified F/A-18A Hornet as a testbed aircraft, with wings that were modified to the flexibility of the original pre-production F-18 wing. Other modifications included a new actuator to operate the outboard portion of a divided leading-edge flap over a greater range and rate, and a research flight control system to host the aeroelastic wing control laws. The Active Aeroelastic Wing project was jointly funded and managed by the Air Force Research Laboratory and NASA Dryden Flight Research Center, with Boeing's Phantom Works as prime contractor.</p> <p>To learn more about the F/A-18 Active Aeroelastic Wing research visit:</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Z2fP29uN6Sc">https://youtu.be/Z2fP29uN6Sc</a>	F-104 Starfighter Simulating an HL- 10 Powered Landing	<p>This 31-second video from the 1970's shows the F-104 approaching the runway at Edwards Air Force Base and simulating an HL-10 lifting body powered landing.</p> <p>With a name like Starfighter, F-104s were destined to serve NASA in the extreme regime of high-speed flight research.</p> <p>NASA's Dryden Flight Research Center (now Armstrong) flew Lockheed F-104 Starfighter aircraft in many missions beginning in August 1956. Over the next 38 years, 11 were operated by NASA Dryden, at Edwards Air Force Base, CA, with the last Starfighter flight taking place in February 1994.</p> <p>NASA Starfighters provided flight research data on everything from aircraft handling characteristics, such as roll coupling, to reaction control system research. With the approaching X-15 rocket-powered research aircraft program in the late 1950's, research pilots needed experience in flying with reaction control systems, which are key to spacecraft control and maneuverability. A NASA F-104 modified with a hydrogen peroxide thruster system provided the necessary experience for the soon-to-be rocket pilots.</p> <p>To learn more about NASA's F-104 Starfighters visit: <a href="https://www.nasa.gov/centers/dryden/home/F-104.html">https://www.nasa.gov/centers/dryden/home/F-104.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 25 NASA Armstrong Flight Research Center <https://youtu.be/X3r0t79indk> F-16XL Supersonic Laminar Flow Test Flight

This 28-second video taken in 1992 shows a wing closeup and the F-16XL in flight. An F-16XL aircraft was used by the Dryden Flight Research Center (now Armstrong) at Edwards, CA, in a NASA-wide program to improve laminar airflow on aircraft flying at sustained supersonic speeds. It was the first program to look at laminar flow on swept wings at speeds faster than sound. Technological data from the program could assist in the development of future high-speed aircraft, including commercial transports.

[Transcript](#)  
[Link](#)

To learn more about the F-16XL visit:

<https://www.nasa.gov/centers/dryden/history/pastprojects/F16XL2/index.html>

2017 07 25 NASA Armstrong Flight Research Center <https://youtu.be/QrUvG3K3xc> F-15 %23837's Last Flight at NASA Dryden

This 1-minute, 2-second video taken on January 30, 2009 features comments by NASA research pilot Jim Smolka after the final flight of NASA's #837 NF-15B aircraft at Dryden (now Armstrong) Flight Research Center.

[Transcript](#)  
[Link](#)

Flight research carried out by NASA with a highly modified F-15 aircraft demonstrated and evaluated advanced integrated flight and propulsion control system technologies that will help make next-generation aircraft more maneuverable, more fuel efficient, and safer to fly.

The NASA F-15 was the first aircraft to demonstrate a fully integrated inlet-engine-flight control system, a self-repairing flight control system, and a propulsion-only flight control system.

The F-15 was designed as twin-engine air superiority fighter by McDonnell Aircraft Co., McDonnell Douglas Corporation, St. Louis, Missouri. The F-15 is normally powered by two Pratt and Whitney F100-PW-100 or 220 engines, depending on the model. The NASA F-15 was equipped with advanced versions of the F100 -- F100 EMD (engine model derivative).

The aircraft was capable of flying more than twice the speed of sound. The F-15 is 63.75 feet long and has a wingspan of 42.83 feet. The NASA F-15 was extensively modified for research activities and did not carry any armament.

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kVolqYcluAg">https://youtu.be/kVolqYcluAg</a> F-15 %23837's Last Flight	This 54-second video taken January 30, 2009 shows NASA research pilot Jim Smolka flying NASA's high-modified NF-15B through a series of test maneuvers on the aircraft's last flight from Dryden (Armstrong) Flight Research Center in California's Mojave Desert.	<a href="#">Transcript Link</a>
			Flight research carried out by NASA with a highly modified F-15 aircraft demonstrated and evaluated advanced integrated flight and propulsion control system technologies that will help make next-generation aircraft more maneuverable, more fuel efficient, and safer to fly.	
			The NASA F-15 was the first aircraft to demonstrate a fully integrated inlet-engine-flight control system, a self-repairing flight control system, and a propulsion-only flight control system.	
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2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EsQKNAGPftM">https://youtu.be/EsQKNAGPftM</a> Two NASA F-15s Investigating Supersonic Shockwave Characteristics	This 53-second video taken on January 15, 2009 shows two F-15s investigating supersonic shockwave characteristics in the Lift and Nozzle Change Effects on Tail Shock (LANCETS) flight research project at Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript Link</a>
			Flight research carried out by NASA with a highly modified F-15 aircraft demonstrated and evaluated advanced integrated flight and propulsion control system technologies that will help make next-generation aircraft more maneuverable, more fuel efficient, and safer to fly.	
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2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/YjnHRObjvls">https://youtu.be/YjnHRObjvls</a>	F-15B Intelligent Flight Control System During a Flight Test Over the Mojave Desert	<p>This 33-second video taken in 2003 shows the highly-modified F-15B #837 flying the Intelligent Flight Control System (IFCS) software during a flight test over California's Mojave Desert.</p> <p>The IFCS flight research project at NASA Dryden (now Armstrong) Flight Research Center was established to exploit a revolutionary technological breakthrough in aircraft flight controls that could efficiently optimize aircraft performance in both normal and failure conditions. IFCS was designed to incorporate self-learning neural network concepts into flight control software to enable a pilot to maintain control and safely land an aircraft that has suffered a failure to a control surface or damage to the airframe.</p> <p>Major control surface or airframe damage hinders an aircraft flight control system's design integrity, rendering traditional fixed control systems virtually worthless. The IFCS team integrated innovative neural network technologies with state-of-the-art control algorithms to correctly identify and respond to changes in aircraft stability and control characteristics, and immediately adjust to maintain the best possible flight performance during an unexpected failure. The adaptive neural network software "learns" the new flight characteristics, on-board and in real time, thereby helping the pilot to maintain or regain control and prevent a potentially catastrophic aircraft accident.</p> <p>The primary goal of the project was to develop adaptive and fault-tolerant flight control systems leading to unprecedented levels of</p>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MRvKizrEVPM">https://youtu.be/MRvKizrEVPM</a>	F-15B Intelligent Flight Control System Performing Test Maneuvers over EAFB	<p>This 32-second video taken in 2003 shows the highly-modified F-15B #837 with the Intelligent Flight Control System (IFCS) software aboard during flight maneuvers over Edwards Air Force Base in Southern California's Mojave Desert.</p> <p>The F-15B IFCS flight research project at NASA Dryden (now Armstrong) Flight Research Center was established to exploit a revolutionary technological breakthrough in aircraft flight controls that can efficiently optimize aircraft performance in both normal and failure conditions. IFCS was designed to incorporate self-learning neural network concepts into flight control software to enable a pilot to maintain control and safely land an aircraft that has suffered a failure to a control surface or damage to the airframe.</p> <p>Major control surface or airframe damage hinders an aircraft flight control system's design integrity, rendering traditional fixed control systems virtually worthless. The IFCS team integrated innovative neural network technologies with state-of-the-art control algorithms to correctly identify and respond to changes in aircraft stability and control characteristics, and immediately adjust to maintain the best possible flight performance during an unexpected failure. The adaptive neural network software "learns" the new flight characteristics, on-board and in real time, thereby helping the pilot to maintain or regain control and prevent a potentially catastrophic aircraft accident.</p> <p>The primary goal of the project was to develop adaptive and fault-</p>

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jeYmSu13Plc">https://youtu.be/jeYmSu13Plc</a>	NASA Dryden Receives Three F-15Ds	This 1-minute, 24-second video shows a group of three 'new' F-15D Eagle aircraft arriving at Dryden (now Armstrong) Flight Research Center on September 21, 2010.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more visit: <a href="https://www.nasa.gov/centers/dryden/Features/F-15Ds_arrive_at_dryden.html">https://www.nasa.gov/centers/dryden/Features/F-15Ds_arrive_at_dryden.html</a>	
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rlyfkf3W8mY">https://youtu.be/rlyfkf3W8mY</a>	F-15B Flight Tests Explore Supersonic Laminar Airflow	In partnership with Aerion Corporation of Reno, NV, NASA's Dryden Flight Research Center's (now Armstrong) tested supersonic airflow over a small experimental airfoil design on its F-15B testbed aircraft during the spring of 2013. Testing the airfoil at actual supersonic speeds enabled engineers to capture data that will allow more precise refinement of supersonic natural laminar flow airfoil design.	<a href="#">Transcript</a> <a href="#">Link</a>
				Duration: 55 seconds	
				To learn more about NASA's F-15B Testbed visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-055-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-055-DFRC.html</a>	
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KwYgtxmzDsk">https://youtu.be/KwYgtxmzDsk</a>	Lifting Insulating Foam Trajectory (LIFT) Flight Test Closeup	This 9-second video from February 2005 shows a closeup of the Lifting Insulating Foam Trajectory (LIFT) flight test flown on NASA's F-15B testbed at Dryden Flight Research Center (now Armstrong) in Southern California.	<a href="#">Transcript</a> <a href="#">Link</a>
				The Space Shuttle Columbia and her crew were lost during mission STS-107 on Feb. 1, 2003. As part of NASA's Return to Flight effort, NASA's Johnson Space Center (JSC) approached NASA's Dryden Flight Research Center for help in modeling thermal protection system foam loss from the Shuttle's external fuel tank.	
				Following the accident, Dryden geared up to provide flight data on foam loss requested by NASA engineers at the JSC. Called the Lifting Insulating Foam Trajectory (LIFT) project, this effort used the Center's F-15B Research Testbed aircraft to acquire data on how insulating foam debris or "divots" behaved when the small pieces were shed from the Shuttle's external fuel tank during launch.	
				The unique capabilities of NASA's supersonic F-15B Research test bed aircraft enabled it to garner the LIFT data in a real flight environment at altitudes up to 50,000 ft. and at speeds up to Mach 2. The project continued NASA Dryden's Shuttle program support of testing Shuttle insulating materials begun with F-104 and F-15 test bed aircraft early in the program.	
				To learn more about the LIFT project visit: <a href="https://www.nasa.gov/mission_pages/shuttle/flyout/lift.html">https://www.nasa.gov/mission_pages/shuttle/flyout/lift.html</a>	

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/HMmGLexu7ZY">https://youtu.be/HMmGLexu7ZY</a> F-15B Lifting Insulating Foam Trajectory (LIFT) Flight Test	<p>This 10-second video taken in February of 2005 shows a NASA F-15B taking off from Edwards Air Force Base in California's Mojave Desert on a Lifting Insulating Foam Trajectory (LIFT) flight test.</p> <p>The Space Shuttle Columbia and her crew were lost during mission STS-107 on Feb. 1, 2003. As part of NASA's Return to Flight effort, NASA's Johnson Space Center (JSC) approached NASA's Dryden Flight Research Center (now Armstrong) for help in modeling thermal protection system foam loss from the Shuttle's external fuel tank.</p> <p>Following the accident, Dryden geared up to provide flight data on foam loss requested by NASA engineers at JSC. Called the Lifting Insulating Foam Trajectory (LIFT) project, this effort used the Center's F-15B Research Testbed aircraft to acquire data on how insulating foam debris or "divots" behaved when the small pieces were shed from the Shuttle's external fuel tank during launch.</p> <p>The unique capabilities of NASA's supersonic F-15B Research test bed aircraft enabled it to garner the LIFT data in a real flight environment at altitudes up to 50,000 ft. and at speeds up to Mach 2. The project continued NASA Dryden's Shuttle program support of testing Shuttle insulating materials begun with F-104 and F-15 test bed aircraft early in the program.</p> <p>To learn more about the LIFT project visit:  <a href="https://www.nasa.gov/mission_pages/shuttle/flyout/lift.html">https://www.nasa.gov/mission_pages/shuttle/flyout/lift.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/K5lb1b4u8F8">https://youtu.be/K5lb1b4u8F8</a> F-15B Transonic Flight Research Testbed Aircraft in Flight	<p>This 45-second video taken August 21, 2001 shows NASA's F-15B Transonic Flight Research Testbed aircraft in flight over California's Mojave Desert and its approach to Edwards Air Force Base.</p> <p>Flight research carried out by NASA Dryden Flight Research Center (now Armstrong) with a highly modified F-15B aircraft demonstrated and evaluated advanced integrated flight and propulsion control system technologies that will help make next-generation aircraft more maneuverable, more fuel efficient, and safer to fly.</p> <p>The NASA F-15B was the first aircraft to demonstrate a fully integrated inlet-engine-flight control system, a self-repairing flight control system, and a propulsion-only flight control system.</p> <p>The F-15B was designed as twin-engine air superiority fighter by McDonnell Aircraft Co., McDonnell Douglas Corporation, St. Louis, MO. The F-15B is normally powered by two Pratt and Whitney F100-PW-100 or 220 engines, depending on the model. The NASA F-15B was equipped with advanced versions of the F100 -- F100 EMD (engine model derivative).</p> <p>The aircraft was capable of flying more than twice the speed of sound. The F-15 is 63.75 feet long and has a wingspan of 42.83 feet. The NASA F-15 was extensively modified for research activities and did not carry any armament.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fpPnvvtCXH8">https://youtu.be/fpPnvvtCXH8</a>	F-15A Remotely Piloted Research Vehicle (RPRV) Flat Spin Test	This 57-second video from 1975 shows a F-15A Remotely Piloted Research Vehicle (RPRV) performing a flat spin test. The RPRV was designed to test spin recovery techniques at a lower cost than using a real F-15, and without the risk to the pilot. The vehicle was carried aloft by the B-52B, then released to fly the spin test. It was controlled by a research pilot on the ground, using standard instruments and video from a nose-mounted television camera.	<a href="#">Transcript</a> <a href="#">Link</a>
				In April of 1971, Assistant Secretary of the Air Force for Research and Development Grant Hanson sent a memorandum noting the comparatively small amount of research being conducted on stalls (losses of lift) and spins despite the yearly losses that they caused (especially of fighter aircraft). In the spring and summer of that year, the NASA Flight Research Center (FRC redesignated in 2014 the Armstrong Flight Research Center) studied the feasibility of conducting flight research with a sub-scale fighter-type Remotely Piloted Research Vehicle (RPRV) in the stall-spin regime.	
				In November, NASA Headquarters approved flight research for a 3/8-scale F-15 RPRV. It would measure aerodynamic derivatives of the aircraft throughout its angle-of-attack range and compare them with those from wind tunnels and full-scale flight. (Angle of attack refers to the angle of the wings or fuselage with respect to the prevailing wind.)	
				The McDonnell Douglas Aircraft Co., builder of the full-size F-15, designed and constructed three, mostly fiberglass, unpowered F-15	
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QZjlahyT8Zk">https://youtu.be/QZjlahyT8Zk</a>	F-15A Remotely Piloted Research Vehicle (RPRV) Flight and Landing	This 34-second video from 1975 shows an F-15 Remotely Piloted Research Vehicle (RPRV) flight and landing. The RPRV was designed to test spin recovery techniques at a lower cost than using a real F-15, and without the risk to the pilot. The vehicle was carried aloft by the B-52B, then released to fly the spin test. It was controlled by a research pilot on the ground, using standard instruments and video from a nose-mounted television camera.	<a href="#">Transcript</a> <a href="#">Link</a>
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2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XvWHgmRf7YU">https://youtu.be/XvWHgmRf7YU</a>	F-15A RPRV Captive Carry Takeoff Under the B-52 Mothership from Edwards AFB	This 32-second video from 1975 shows a captive carry with the F-15A Remotely Piloted Research Vehicle (RPRV). The RPRV was designed to test spin-recovery techniques at a lower cost than using a real F-15, and without the risk to the pilot. The vehicle was carried aloft by the B-52B, then released to fly the spin test. It was controlled by a research pilot on the ground, using standard instruments and video from a nose-mounted television camera.	<a href="#">Q</a>
				In April of 1971, Assistant Secretary of the Air Force for Research and Development Grant Hanson sent a memorandum noting the comparatively small amount of research being conducted on stalls (losses of lift) and spins despite the yearly losses that they caused (especially of fighter aircraft).	
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2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZCmDXuCsYNs">https://youtu.be/ZCmDXuCsYNs</a>	F-15A Level and Inverted Flight Test	This 34-second video from the mid-1970's shows a NASA F-15A research aircraft performing a level and inverted flight test over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				The number two F-15A (Serial #71-0281) was obtained by NASA from the U.S. Air Force in 1976 and was used for more than 25 advanced research projects involving aerodynamics, performance, propulsion control, control integration, instrumentation development, human factors, and flight test techniques. Included in these projects was its role as a testbed to evaluate aerodynamic pressures on Space Shuttle thermal protection tiles at specific altitudes and speeds.	
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2pPQaZCTCQ">https://youtu.be/2pPQaZCTCQ</a>	NASA F-15A Performing a Research Test Flight	This 34-second video from 1976 shows a NASA F-15A performing a test flight over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				The number two F-15A (Serial #71-0281) was obtained by NASA from the U.S. Air Force in 1976 and was used for more than 25 advanced research projects involving aerodynamics, performance, propulsion control, control integration, instrumentation development, human factors, and flight test techniques. Included in these projects was its role as a testbed to evaluate aerodynamic pressures on Space Shuttle thermal protection tiles at specific altitudes and speeds.	

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ix7xBtMiBUg">https://youtu.be/ix7xBtMiBUg</a>	F-15A Taking Off with an F-104 Chase Plane	<p>This 37-second video from 1976 shows a NASA F-15A taking off for a test flight from Edwards Air Force Base with an F-104 chase plane along side.</p> <p>The number two F-15A (Serial #71-0281) was obtained by NASA from the U.S. Air Force in 1976 and was used for more than 25 advanced research projects involving aerodynamics, performance, propulsion control, control integration, instrumentation development, human factors, and flight test techniques. Included in these projects was its role as a testbed to evaluate aerodynamic pressures on Space Shuttle thermal protection tiles at specific altitudes and speeds.</p>	<a href="#">Transcript Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Z9ytoSb04Wg">https://youtu.be/Z9ytoSb04Wg</a>	F-15A Research Pilot Performing Pre-flight Checkout	<p>This 49-second video from 1976 shows a NASA test pilot performing pre-flight checkout procedures on an F-15A research aircraft at Dryden Flight Research Center (now Armstrong) at Edwards Air Force Base in California's Mojave Desert.</p> <p>The number two F-15A (Serial #71-0281) was obtained by NASA from the U.S. Air Force in 1976 and was used for more than 25 advanced research projects involving aerodynamics, performance, propulsion control, control integration, instrumentation development, human factors, and flight test techniques. Included in these projects was its role as a testbed to evaluate aerodynamic pressures on Space Shuttle thermal protection tiles at specific altitudes and speeds.</p> <p>More information on the F-15A is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-022-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-022-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/lBsJLXgwbU4">https://youtu.be/lBsJLXgwbU4</a>	F-14 Tomcat Dive and Pullout	<p>This 26-second video from 1979 shows a Grumman F-14 Tomcat (NASA 991) undergoing a dive and pullout test flight over Edwards Air Force Base in California's Mojave Desert.</p> <p>NASA 991, an F-14 Navy Tomcat designated the F-14 (1X), the 1X signifying that it was Grumman's experimental testbed, was used at Dryden Flight Research Center (now Armstrong) between 1979 and 1985 in extensive high-angle-of-attack and spin-control-and-recovery tests.</p> <p>The NASA/Navy program, which included 212 total flights, achieved considerable improvement in the F-14 high-angle-of-attack flying qualities, improved departure and spin resistance, and contributed to substantial improvements in reducing "wing rock," (i.e., tilting from one side to another), at high angles of attack.</p> <p>The Navy had been experiencing inadvertent spin entries caused by the F-14's aileron rudder interconnect. The NASA/Navy/Grumman team developed and tested 4 different configurations of the aileron rudder interconnect to address the spin problem. These problems prompted the Navy to ask the manufacturer, Grumman, and NASA to investigate the issue.</p> <p>The tail control surfaces on F-14s are known as "rolling tails", in that the aircraft does not have ailerons on the wings to control roll. Roll control is instead provided at low speeds by wing-mounted spoilers and at high speeds by differential horizontal stabilizer deflection.</p>	<a href="#">Transcript Link</a>

2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-Mpdm2SekA0">https://youtu.be/-Mpdm2SekA0</a>	F-14 Tomcat Spin Test	<p>This 41-second video from 1980 shows a Grumman F-14 Tomcat (NASA 991) undergoing a spin test over Edwards Air Force Base in California's Mojave Desert.</p> <p>NASA 991, an F-14 Navy Tomcat designated the F-14 (1X), the 1X signifying that it was Grumman's experimental testbed, was used at Dryden Flight Research Center (now Armstrong) between 1979 and 1985 in extensive high-angle-of-attack and spin-control-and-recovery tests.</p> <p>The NASA/Navy program, which included 212 total flights, achieved considerable improvement in the F-14 high-angle-of-attack flying qualities, improved departure and spin resistance, and contributed to substantial improvements in reducing "wing rock," (i.e., tilting from one side to another), at high angles of attack.</p> <p>The Navy had been experiencing inadvertent spin entries caused by the F-14's aileron rudder interconnect. The NASA/Navy/Grumman team developed and tested four different configurations of the aileron rudder interconnect to address the spin problem. These problems prompted the Navy to ask the manufacturer, Grumman Aerospace Corporation, and NASA to investigate the issue.</p> <p>The tail control surfaces on F-14s were known as "rolling tails," in that the aircraft did not have ailerons on the wings to control roll. Roll control was instead provided at low speeds by wing-mounted spoilers and at high speeds by differential horizontal stabilizer</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jwiYd0JvHo">https://youtu.be/jwiYd0JvHo</a>	F-8 Supercritical Wing (SCW) in Flight	<p>This 31-second video from 1971 shows the the F-8 Supercritical Wing conducting a test flight and landing at Edwards Air Force Base in California's Mojave Desert.</p> <p>The F-8 Supercritical Wing was a flight research project designed to test a new wing concept designed by Dr. Richard Whitcomb, chief of the Transonic Aerodynamics Branch, Langley Research Center, Hampton, VA. Compared to a conventional wing, the supercritical wing (SCW) is flatter on the top and rounder on the bottom with a downward curve at the trailing edge. The Supercritical Wing was designed to delay the formation of and reduce the shock wave over the wing just below and above the speed of sound (transonic region of flight). Delaying the shock wave at these speeds results in less drag.</p> <p>Results of the NASA flight research at the Flight Research Center, Edwards, CA, (now the Armstrong Flight Research Center) demonstrated that aircraft using the supercritical wing concept would have increased cruising speed, improved fuel efficiency, and greater flight range than those using conventional wings. As a result, supercritical wings are now commonplace on virtually every modern subsonic commercial transport. Results of the NASA project showed the SCW had increased the transonic efficiency of the F-8 as much as 15 percent and proved that passenger transports with supercritical wings, versus conventional wings, could save \$78 million (in 1974 dollars) per year for a fleet of 280 200-passenger airliners.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 25 NASA Armstrong Flight Research Center <https://youtu.be/o5tITGovVuI> Chase Plane View of F-8 DFBW Pilot-Induced Oscillations This 38-second video taken on April 18, 1978 shows the chase plane view of the F-8 Digital Fly-By-Wire aircraft undergoing pilot-induced oscillations during an approach to the runway at Edwards Air Force Base in California's Mojave Desert. [Transcript Link](#)

From 1972 to 1985 the NASA Dryden Flight Research Center (now Armstrong) conducted flight research with an F-8C employing the first digital fly-by-wire flight control system without a mechanical back up. The decision to replace all mechanical control linkages to rudder, ailerons, and other flight control surfaces was made for two reasons. First, it forced the research engineers to focus on the technology and issues that were truly critical for a production fly-by-wire aircraft. Secondly, it would give industry the confidence it needed to apply the technology--confidence it would not have had if the experimental system relied on a mechanical back up.

In the first few decades of flight, pilots had controlled aircraft through direct force--moving control sticks and rudder pedals linked to cables and pushrods that pivoted control surfaces on the wings and tails.

As engine power and speeds increased, more force was needed and hydraulically boosted controls emerged. Soon, all high-performance and large aircraft had hydraulic-mechanical flight-control systems. These conventional flight control systems restricted designers in the configuration and design of aircraft because of the need for flight stability.

2017 07 25 NASA Armstrong Flight Research Center <https://youtu.be/24sbPDJ-MGA> F-8 DFBW Fin Camera View of Pilot-Induced Oscillations This 14-second video taken on April 18, 1978 shows a fin camera view of the F-8 Digital Fly-By-Wire aircraft undergoing pilot-induced oscillations during an approach and landing at Edwards Air Force Base in California's Mojave Desert. [Transcript Link](#)

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2017 07 25 NASA Armstrong Flight Research Center <https://youtu.be/o2ls3mU2p1M> F-8 Digital-Fly-By-Wire Pilot-Induced Oscillations This 28-second video taken on April 18, 1978 shows the F-8 Digital-Fly-By-Wire aircraft approaching the runway at Edwards Air Force Base and undergoing a flight test that includes pilot-induced oscillations. [Transcript Link](#)

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2017 07 24 NASA Armstrong Flight Research Center <https://youtu.be/OzNo0fmQt3s> Eclipse QF-106 Tethered Flight %234 This 33-second video taken January 28, 1998 shows the QF-106 "Delta Dart" being towed on a long tether behind an Air Force C-141 over Edwards Air Force Base in California's Mojave Desert during the Eclipse Tow Launch Demonstration Project. [Transcript Link](#)

NASA Dryden Flight Research Center (now Armstrong) supported a Kelly Space and Technology, Inc. (KST)/U.S. Air Force project, known as Eclipse, which demonstrated a reusable tow launch vehicle concept.

The purpose of the project was to demonstrate a reusable tow launch vehicle concept conceived and patented by KST. Kelly Space obtained a contract with the USAF Research Laboratory for the tow launch demonstration project under the Small Business Innovation Research (SBIR) program. The USAF SBIR contract included the modifications to turn the QF-106 into the Experimental Demonstrator #1 (EXD-01), and C-141A aircraft to incorporate the tow provisions to link the two aircraft, as well as conducting flight tests. The demonstration consisted of ground and flight tests.

To learn more about the Eclipse project visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-049-DFRC.html>

2017 07 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ghjQo-rz07c">https://youtu.be/ghjQo-rz07c</a>	Eclipse QF-106 Tethered Flight %234	This 34-second video taken January 28, 1998 shows the QF-106 being towed on a long tether behind an Air Force C-141 over Edwards Air Force Base in California's Mojave Desert during the Eclipse Tow Launch Demonstration Project.	<a href="#">Transcript</a> <a href="#">Link</a>
				NASA Dryden Flight Research Center (now Armstrong) supported a Kelly Space and Technology, Inc. (KST)/U.S. Air Force project, known as Eclipse, which demonstrated a reusable tow launch vehicle concept.	
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2017 07 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/a88xM-Euer4">https://youtu.be/a88xM-Euer4</a>	C-140 JetStar Landing on Rogers Dry Lakebed	This 26-second video from the 1970's shows C-140 JetStar landing on Rogers Dry Lakebed.	<a href="#">Transcript</a> <a href="#">Link</a>
				From 1976 to 1987 the NASA Lewis Research Center, Cleveland, OH - today known as the Glenn Research Center -- engaged in research and development of an advanced turboprop concept in partnership with Hamilton Standard, Windsor Locks, CT, the largest manufacturer of propellers in the United States. The Advanced Turboprop Project took its impetus from the energy crisis of the early 1970's and sought to produce swept propeller blades that would increase efficiency and reduce noise.	
				As the project progressed, Pratt & Whitney, Allison Gas Turbine Division of General Motors, General Electric, Gulfstream, Rohr Industries, Boeing, Lockheed, and McDonnell Douglas, among others, also took part. NASA Lewis did the much of the ground research and marshaled the resources of these and other members of the aeronautical community. The team came to include the NASA Ames Research Center, Langley Research Center, and the Ames-Dryden Flight Research Facility (before and after that time, the Dryden Flight Research Center). Together, they brought the propeller to the flight research stage, and the team that worked on the project won the coveted Collier Trophy for its efforts in 1987.	
				To test the acoustics of the propeller the team developed, it mounted propeller models on a C-140 JetStar aircraft fuselage at NASA Dryden. The JetStar was modified with the installation of an	

2017 07 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/e8hwg_hhIPSA">https://youtu.be/e8hwg_hhIPSA</a>	AD-1 Pivoting Wing Design Research Flight	This 32-second video was taken between 1979 and 1982 at NASA's Ames-Dryden Flight Research Facility (now Armstrong Flight Research Center). It shows the Ames-Dryden-1 (AD-1) performing a test flight over California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				The AD-1 was designed as a low-cost/low-speed research aircraft to test a pivot wing design. The AD-1 took off with its wing positioned at a right angle to the fuselage. Once in the air, the wing would rotate on its pivot point on the fuselage until it formed a 60 degree angle. The goal was to design a high-speed transport with low drag. The AD-1 made a total of 79 flights, but adverse handling at sharp sweep angles made the approach less attractive.		
				To learn more about the AD-1 visit: <a href="https://www.nasa.gov/centers/dryden/history/pastprojects/AD1/index.html">https://www.nasa.gov/centers/dryden/history/pastprojects/AD1/index.html</a>		
2017 07 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EpcpxkZ5zII">https://youtu.be/EpcpxkZ5zII</a>	AD-1 Wing Pivoting in Flight	This 21-second video was taken between 1979 and 1982 at NASA's Ames-Dryden Flight Research Facility (now Armstrong Flight Research Center). It shows the Ames-Dryden-1 (AD-1), a research aircraft designed to investigate the concept of an oblique or pivoting wing.	<a href="#">Transcript</a> <a href="#">Link</a>	
				The AD-1 was designed as a low-cost/low-speed research aircraft to test a pivot-wing design. The AD-1 took off with its wing positioned at a right angle with the fuselage. Once in the air, the wing would rotate on its pivot point on the fuselage until it formed a 60 degree angle. The goal was to design a high-speed transport with low drag. The AD-1 made a total of 79 flights, but adverse handling at sharp sweep angles made the approach less attractive.		
				To learn more about the AD-1 visit: <a href="https://www.nasa.gov/centers/dryden/history/pastprojects/AD1/index.html">https://www.nasa.gov/centers/dryden/history/pastprojects/AD1/index.html</a>		
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/K795nj60gyo">https://youtu.be/K795nj60gyo</a>	NASA's Orion MPCV Capsule Departs Dryden for KSC	The Orion prototype version of NASA's Multi-Purpose Crew Vehicle (MPCV) that was used in the Launch Abort System PA-1 test last year, departed NASA's Dryden Flight Research Center (now Armstrong) in California on June 14, 2011. The truck-mounted capsule was displayed at two museums in Arizona and Texas and an education center in Florida before its arrival at the Kennedy Space Center in Florida in late June of 2011.	<a href="#">Transcript</a> <a href="#">Link</a>	
				Duration: 58 seconds		
				To lean more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>		

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/j73gBb641So">https://youtu.be/j73gBb641So</a>	Acoustic Tests on the Orion Test Module for the First Launch Abort System Flight Test	This 1-minute, 8-second video taken May 16, 2009 shows engineers at NASA Dryden Flight Research Center (now Armstrong) conducting acoustic tests on the Orion Test Module for the First Launch Abort System Flight Test.  To lean more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/5IKTIYIwlrU">https://youtu.be/5IKTIYIwlrU</a>	NASA Animation of the Orion Module Launch Abort System Pad Abort Flight Test	This 1-minute, 6-second NASA animation from November of 2008 depicts a simulation of the Orion Module Launch Abort System Pad Abort Flight Test.  To lean more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RCMO81Tvpul">https://youtu.be/RCMO81Tvpul</a>	NASA Technicians Conducting Moment-of-Inertia Tests on the Orion PA-1 Crew Module	This 51-second video taken in November of 2008 shows NASA technicians conducting moment-of-inertia tests on the Orion PA-1 Crew Module at Dryden Flight Research Center (now Armstrong) in California's Mojave Desert.	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-UvOBM7Ry9E">https://youtu.be/-UvOBM7Ry9E</a>	Engineers Conduct Weight-and-Balance Tests on the Orion PA-1 Crew Module	This 1-minute video taken in November of 2008 shows engineers conducting weight-and-balance tests on the Orion PA-1 Crew Module at Dryden Flight Research Center (now Armstrong) in California's Mojave Desert.  To lean more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UV4Tw3f9p5A">https://youtu.be/UV4Tw3f9p5A</a>	Time-lapse Video of the Orion Capsule Undergoing Tests at Dryden	This 29-second video from October of 2008 shows a time-lapse video of the Orion Crew Module capsule undergoing weight, balance, and center-of-gravity tests at NASA's Dryden Flight Research Center (now Armstrong).  To learn more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aalhxQJP42M">https://youtu.be/aalhxQJP42M</a>	Orion Test Crew Module Being Towed to NASA Dryden Flight Research Center	This 1-minute, 7-second video taken April 1, 2008 shows the Orion Crew Module being escorted by a large crew of workers while it is being towed down the flight line from the Edwards Air Force Base paint shop to NASA Dryden Flight Research Center (now Armstrong).  To learn more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jtB-aVobyCE">https://youtu.be/jtB-aVobyCE</a>	Air Force Crew Paints the First Orion Crew Module Flight Test Vehicle	This 29-second video taken April 1, 2008 shows the Orion Air Force crew applying a new paint job to the first Crew Module flight test vehicle at Edwards Air Force Base, California.  To learn more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MliZbZaWRVY">https://youtu.be/MliZbZaWRVY</a>	Air Force Crew Prepares Orion Crew Module Flight Test Vehicle for Painting	This 57-second video taken March 29 - 30, 2008 shows the Orion Crew Module flight test vehicle being prepared for a new paint job at Edwards Air Force Base in California's Mojave Desert.  To learn more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mOU DUJ6j-I">https://youtu.be/mOU DUJ6j-I</a>	Orion Crew Module Flight Test Vehicle Arriving at Dryden on an Air Force C-17	This 1-minute, 27-second video taken April 1, 2008 shows the Orion Crew Module flight test vehicle arriving at NASA Dryden Flight Research Center (now Armstrong) on an Air Force C-17.  To learn more about Orion visit: <a href="https://www.nasa.gov/exploration/systems/orion/index.html">https://www.nasa.gov/exploration/systems/orion/index.html</a>	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ADvfGtc-UgE">https://youtu.be/ADvfGtc-UgE</a>	Mars Exploration Rover Turn Evaluation Test on Rogers Dry Lake	This 31-second video from June 17, 2003 shows the Turn Evaluation Test conducted on the Rogers Dry Lake in California's Mojave Desert by the Mars Exploration Rover. The Mars-like terrain was used to try out navigation software aboard an earth-bound prototype rover.	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oB80r7TzCuA">https://youtu.be/oB80r7TzCuA</a>	Mars Exploration Rover Navigation and Maneuver Test on Rogers Dry Lake	This 35-second video from June 17, 2003 shows the Navigation and Maneuver Test conducted on the Rogers Dry Lake in California's Mojave Desert by the Mars Exploration Rover. The Mars-like terrain was used to try out navigation software aboard an earth-bound prototype rover.	<a href="#">0</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zkHpozqJCMA">https://youtu.be/zkHpozqJCMA</a>	Mars Exploration Rover Incline Stability Test on Rogers Dry Lake	This 47-second video taken June 17, 2003 shows the Incline Stability Test conducted on the Rogers Dry Lake in California's Mojave Desert by the Mars Exploration Rover. The Mars-like terrain was used to try out navigation software aboard an earth-bound prototype rover.	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 20 NASA  
Armstrong  
Flight  
Research  
Center <https://youtu.be/HGvUIzViQm0> Mars Exploration  
Rover Terrain  
Simulation Tests  
on Rogers Dry  
Lake This 42-second video taken June 17, 2003 shows a terrain  
simulation test conducted on Rogers Dry Lake in California's Mojave  
Desert by the Mars Exploration Rover. The Mars-like terrain was  
used to try out navigation software aboard an earth-bound  
prototype rover. [Transcript  
Link](#)

2017 07 20 NASA  
Armstrong  
Flight  
Research  
Center [https://youtu.be/AC5GD  
FKDYBA](https://youtu.be/AC5GD FKDYBA) Lunar Landing  
Research Vehicle -  
Take Off and Flight NASA's Flight Research Center performing a test flight of the Lunar  
Landing Research Vehicle (LLRV) over California's Mojave Desert. [Transcript  
Link](#)

The LLRVs, humorously referred to as "flying bedsteads," were created by NASA's Flight Research Center (now Armstrong Flight Research Center) to study and analyze piloting techniques needed to fly and land the tiny Apollo Lunar Module in the moon's airless environment.

Success of the LLRVs led to the building of three Lunar Landing Training Vehicles (LLTVs) used by Apollo astronauts at the Manned Spacecraft Center, Houston, TX, predecessor of NASA's Johnson Space Center.

Apollo 11 astronaut Neil Armstrong, first human to step onto the moon's surface, said the mission would not have been successful without the type of simulation that resulted from the LLRVs and LLTVs.

To learn more about the LLRV visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html>

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-3wkywEAXA">https://youtu.be/-3wkywEAXA</a>	Early Lunar Landing Research Vehicle Test Flight	This 34-second video from the mid-1960s shows an early test flight of the Lunar Landing Research Vehicle (LLRV) being performed at the Flight Research Center in Edwards, CA.	<a href="#">Transcript Link</a>
				The LLRVs, humorously referred to as "flying bedsteads," were created by NASA's Flight Research Center (now Armstrong Flight Research Center) to study and analyze piloting techniques needed to fly and land the tiny Apollo Lunar Module in the moon's airless environment.	
				Success of the LLRVs led to the building of three Lunar Landing Training Vehicles (LLTVs) used by Apollo astronauts at the Manned Spacecraft Center, Houston, TX, predecessor of NASA's Johnson Space Center.	
				Apollo 11 astronaut Neil Armstrong, first human to step onto the moon's surface, said the mission would not have been successful without the type of simulation that resulted from the LLRVs and LLTVs.	
				To learn more about the LLRV visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html</a>	
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wpULVgOyYG4">https://youtu.be/wpULVgOyYG4</a>	LLRV Training Flight with Astronaut Neil Armstrong	This 39-second video from 1969 shows an Lunar Landing Research Vehicle (LLRV) training flight at the Manned Spacecraft Center in Houston, TX with astronaut Neil Armstrong at the controls.	<a href="#">Transcript Link</a>
				For more information on the LLRV, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html</a>	
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nr9OyCnpCUM">https://youtu.be/nr9OyCnpCUM</a>	LLRV Training Flight at the Manned Spacecraft Center	This 48-second video from 1969 shows a Lunar Landing Research Vehicle (LLRV) training flight at the Manned Spacecraft Center in Houston, TX.	<a href="#">Transcript Link</a>
				The LLRVs, humorously referred to as "flying bedsteads," were created by NASA's Flight Research Center (now the Armstrong Flight Research Center) to study and analyze piloting techniques needed to fly and land the tiny Apollo Lunar Module in the moon's airless environment.	
				Success of the LLRVs led to the building of three Lunar Landing Training Vehicles (LLTVs) used by Apollo astronauts at the Manned Spacecraft Center, Houston, TX, predecessor of NASA's Johnson Space Center.	
				Apollo 11 astronaut Neil Armstrong, first human to step onto the moon's surface, said the mission would not have been successful without the type of simulation that resulted from the LLRVs and LLTVs.	
				To learn more about the LLRV visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html</a>	

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/S-cmeTFxeSY">https://youtu.be/S-cmeTFxeSY</a>	Lunar Landing Research Vehicle (LLRV) Takeoff and Hover Flight	<p>This 48-second video from 1969 shows a Lunar Landing Research Vehicle (LLRV) taking off and hovering during an early flight test.</p> <p>The LLRVs, humorously referred to as "flying bedsteads," were created by NASA's Flight Research Center (now Armstrong Flight Research Center) to study and analyze piloting techniques needed to fly and land the tiny Apollo Lunar Module in the moon's airless environment.</p> <p>Success of the LLRVs led to the building of three Lunar Landing Training Vehicles (LLTVs) used by Apollo astronauts at the Manned Spacecraft Center, Houston, TX, predecessor of NASA's Johnson Space Center.</p> <p>Apollo 11 astronaut Neil Armstrong, first human to step onto the moon's surface, said the mission would not have been successful without the type of simulation that resulted from the LLRVs and LLTVs.</p> <p>To learn more about the LLRV visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-026-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gY9utQ42mqg">https://youtu.be/gY9utQ42mqg</a>	Flight Recording Devices at the Flight Research Center, Edwards CA	This 33-second video from the late 1950s shows a variety of flight recording devices used at the Flight Research Center at Edwards, California.	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cnsGZg8AvsA">https://youtu.be/cnsGZg8AvsA</a>	Pegasus Air Launch From L- 1011	This 36-second video taken August 12, 2003 shows the Pegasus® launch vehicle being released from the L-1011 carrier aircraft, the ignition of its solid rocket motor, and then the beginning of the long climb to orbit.	<a href="#">Transcript</a> <a href="#">Link</a>
				A group of industry entrepreneurs approached NASA's Dryden Flight Research Center (now Armstrong) in the late 1980's about using the Center's B-52 to help them test a new and potentially more cost-effective way of launching small payloads into orbit. Under the sponsorship of the Advanced Research Projects Agency (ARPA, now the Defense Advanced Research Projects Agency), the Orbital Sciences Corporation had developed an air-launched rocket-booster system named Pegasus, in which the launch aircraft would replace the first stage of what would otherwise have been a four-stage launch system.	
				The launch aircraft would release a winged booster rocket at an altitude of close to 40,000 feet. It was a three-stage, solid-propellant rocket. The final rocket stage carried the 1,500-lb payload into orbit. Orbital Sciences teamed with the Hercules Corporation to manufacture the rocket motors and Scaled Composites for the booster system wing. The vehicle still needed a suitable launch aircraft and, with its custom launch pylon, the Dryden B-52 was a logical choice.	
				Dryden research pilots carried the first Pegasus aloft under the B-52 wing in April 1990. The launch was successful, and it marked one of	
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/X1Qi6GJclAQ">https://youtu.be/X1Qi6GJclAQ</a>	Second Test Flight of the Inflatable Wing Technology Demonstrator	This 48-second video from May 7, 2001 shows the second test flight of the Inflatable Wing Technology Demonstrator at Edwards Air Force Base. The deployable, inflatable wing technology demonstrator experiment represented a basic flight research effort by personnel at NASA's Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript</a> <a href="#">Link</a>
				Three successful flights of the I2000 inflatable wing aircraft occurred. During the flights, the team air-launched the radio-controlled (R/C) I2000 from an R/C utility airplane at an altitude of 800-1000 feet.	
				As the I2000 separated from the carrier aircraft, its inflatable wings "popped-out," deploying rapidly via an on-board nitrogen bottle. The aircraft remained stable as it transitioned from wingless to winged flight. The unpowered I2000 glided down to a smooth landing under complete control.	

2017 07 20 NASA Armstrong Flight Research Center <https://youtu.be/uGwXc9wxliM> First Test Flight of the Inflatable Wing Technology Demonstrator This 42-second video taken April 25, 2001 shows the first test flight of the Inflatable Wing Technology Demonstrator. The deployable, inflatable wing technology demonstrator experiment represented a basic flight research effort by personnel at Dryden Flight Research Center (now Armstrong). [Transcript Link](#)

Three successful flights of the I2000 inflatable wing aircraft occurred. During the flights, the team air-launched the radio-controlled (R/C) I2000 from an R/C utility airplane at an altitude of 800-1000 feet.

As the I2000 separated from the carrier aircraft, its inflatable wings "popped-out," deploying rapidly via an on-board nitrogen bottle. The aircraft remained stable as it transitioned from wingless to winged flight. The unpowered I2000 glided down to a smooth landing under complete control.

2017 07 20 NASA Armstrong Flight Research Center [https://youtu.be/rqg\\_wCxukxQ](https://youtu.be/rqg_wCxukxQ) NACA High-Speed Flight Research Station This 33-second video from the early 1950's features the infrastructure and facilities at the National Advisory Committee for Aeronautics (NACA) High-Speed Flight Research Station in Muroc, CA. [Transcript Link](#)

In October 1946, five engineers arrived at Muroc Army Air Field from the NACA Langley Research Center in Hampton, VA. By December, there were thirteen NACA employees at the base, detailed to the remote location for the X-1 research project. Muroc's main allure was the dry lakebed, the largest such geologic feature in the world, and seemingly endless sunny days with cloudless skies. The Army provided NACA space in one of two main hangars on South Base.

Meanwhile, the Army conducted its most sensitive operations at the more remote North Base facility several miles further north on the lakeshore. In addition to NACA, elements of the Army Air Forces and aviation contractors directly involved in flight-testing and research were at South Base. Given the remoteness of the Army field, many of the engineers and women computers found rudimentary housing on the base, in barracks dubbed "Kerosene Flats" for the permeating odor of the heating and cooking fuel. All NACA activity between 1946 and 1954 was conducted out of the work area provided on South Base as well as several adobe revetments where rocket engines were test run.

To learn more about NACA visit: <https://www.nasa.gov/naca100>

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nvpplPiYiNO">https://youtu.be/nvpplPiYiNO</a>	Automatic Collision Avoidance Technology (ACAT)	This 2-minute 41-second video from 2010 shows inflight footage of an F-16D aircraft flying over California's Mojave Desert during the Automatic Collision Avoidance Technology, or ACAT project.	<a href="#">Transcript</a> <a href="#">Link</a>
				The joint U.S. Air Force/NASA F-16D Automatic Collision Avoidance Technology, or ACAT, project phase led by NASA's Dryden Flight Research Center concluded with completion of the Automatic Ground Collision Avoidance System (Auto GCAS) flight testing in August 2010. The project has now transitioned to the Air Force Flight test Center's 416th Flight Test Squadron for production testing of the Auto GCAS software, with an anticipated in-service fielding date of 2014.	
				The Fighter Risk Reduction Project is the first flight research effort being conducted under the Automatic Collision Avoidance Technology program of the Air Force Research Laboratory at Wright-Patterson Air Force Base in Dayton, OH. Actual test flights of the system began in the fall of 2009.	
				To learn more about the ACAT project visit: <a href="https://www.nasa.gov/centers/dryden/research/ACAT_FRRP/index.html">https://www.nasa.gov/centers/dryden/research/ACAT_FRRP/index.html</a>	
2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/AXwZMzDUEt8">https://youtu.be/AXwZMzDUEt8</a>	NACA Research Aircraft Behind Main Hangar at South Base	This 22-second video taken in the early 1950s shows a fleet of National Advisory Committee for Aeronautics (NACA) high-speed experimental research aircraft parked behind the main hangar at South Base at Edwards, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the these experimental aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/index.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/index.html</a>	

2017 07 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/dl2y3KgnU9E">https://youtu.be/dl2y3KgnU9E</a>	Dryden Lifting Body Fleet X-24A, M2-F3, and HL-10 on Rogers Lakebed	<p>This 28-second video from the 1970's shows the Dryden lifting body fleet parked on Rogers Dry Lakebed. It consisted of the X-24A, M2-F3, and HL-10.</p> <p>A fleet of lifting bodies flown at NASA's Flight Research Center (FRC) (now Armstrong Flight Research Center) at Edwards Air Force Base from 1963 to 1975 demonstrated the ability of pilots to maneuver and safely land a wingless vehicle. These lifting bodies were designed to validate the concept of flying a wingless vehicle back to Earth from space and landing it like an aircraft at a pre-determined site.</p> <p>These unique research vehicles, with their unconventional aerodynamic shapes, were the M2-F1, M2-F2, M2-F3, HL-10, X-24A, and the X-24B. The information the lifting body program generated contributed to the database that led to development of the Space Shuttle program.</p> <p>Aerodynamic lift - essential to flight in the atmosphere - was obtained from the shape of the vehicles rather than from wings as on a normal aircraft. The addition of fins and control surfaces allowed the pilots to stabilize and control the vehicles and regulate their flight paths.</p> <p>All but the M2-F1 were powered by the same type of XLR-11 rocket engine used in the Bell X-1 - the first aircraft to fly faster than the speed of sound. The M2-F1, a lightweight prototype, was</p>	<a href="#">Q</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/iJ8ij5iDRNI">https://youtu.be/iJ8ij5iDRNI</a>	NASA Armstrong Hosts Solar Eclipse Educator Workshop	<p>The first solar eclipse in 99 years to cross the entire continental United States will occur Aug. 21, 2017. NASA Armstrong Flight Research Center's Office of Education at the AERO Institute in Palmdale, California, presented a solar eclipse workshop June 28 to regional educators to provide the resources needed to teach students about this phenomenon. Educator Professional Development Specialist Barbie Buckner gave workshop participants an overview of the science behind eclipses and demonstrated activities teachers can use to explain eclipses to students. To learn more about the upcoming eclipse, visit: <a href="https://eclipse2017.nasa.gov/">https://eclipse2017.nasa.gov/</a>.</p>	<a href="#">Transcript Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gzadK1-3Is">https://youtu.be/gzadK1-3Is</a>	X-43A Hypersonic Scramjet - Compiled Video, from Flights 2 and 3	<p>This 1-minute, 41-second movie shows NASA's X-43A demonstrating supersonic-combustion ramjet (scramjet) propulsion during two of its record-setting flights in 2004.</p> <p>Both flights, the first on Mar. 27 and the second on Nov. 16, 2004, demonstrated sustained thrust from the X-43A's air-breathing scramjet engine, the first at nearly 5,000 mph, the second at nearly 7,000 mph, or almost 10 times the speed of sound.</p> <p>To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a></p>	<a href="#">Transcript Link</a>

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Q641M3zmn0g">https://youtu.be/Q641M3zmn0g</a>	X-43A Pegasus Booster Rocket Launch From B-52	This 63-second video taken November 16, 2004 shows the Pegasus / X-43A stack being dropped from NASA's B-52 for a Mach-10 test flight of the X-43A hypersonic vehicle over the Pacific Ocean.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/yizzZK7zN6U">https://youtu.be/yizzZK7zN6U</a>	B-52B takeoff with X-43A	This 40-second video taken November 16, 2004 shows NASA's B-52B takeoff carrying the X-43A as it travels to a site over the Pacific Ocean for its record setting Mach-10 flight.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Tfb3ZkW1yK0">https://youtu.be/Tfb3ZkW1yK0</a>	X-43A Getting Ready for Mach 10	This 1-minute, 16-second video released November 1, 2004 is an overview of the X-43A program as it prepares for a Mach 10 hypersonic flight.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Z02skagJDck">https://youtu.be/Z02skagJDck</a>	Captive-Carry Flight of X-43A Vehicle %233	This 32-second video taken September 27, 2004 shows a captive-carry flight of the Pegasus / X-43A stack underneath the wing NASA's B-52 Mothership. The flight was based from NASA's Dryden Flight Research Center (now Armstrong) and flew over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/168p5BK9V08">https://youtu.be/168p5BK9V08</a>	X-43A Hypersonic Separation and Free-Flight Infrared Footage	This 35-second video was taken by the U. S. Army on March 27, 2004 and it consists of infrared footage showing the X-43A's hypersonic separation and free flight.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PDE6rANOkGE">https://youtu.be/PDE6rANOkGE</a>	X-43A Successful Launch from B-52 Mothership	This 32-second video taken March 27, 2004 shows a successful launch of the X-43A from the B-52 mothership on its second test flight.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/lgEPTp8tyPo">https://youtu.be/lgEPTp8tyPo</a>	X-43A Pre-launch Flight Control Tests	This 31-second video taken on March 27, 2004 shows the X-43A pre-launch flight control tests on its second test flight.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gjZnQp1OfRs">https://youtu.be/gjZnQp1OfRs</a>	X-43A Taking Off on Second Test Flight	This 37-second video taken March 27, 2004 shows the X-43A and B-52 taking off for second test flight of the NASA's Hyper-X Program.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QdKRPo_tOZg">https://youtu.be/QdKRPo_tOZg</a>	X-43 Program Overview	This 1-minute, 40-second video from January 26, 2004 contains video highlights, flight footage, and program overview comments for NASA's X-43A / Hyper-X hypersonic research vehicle.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7wgvqfG5xtQ">https://youtu.be/7wgvqfG5xtQ</a>	X-43A Captive- Carry Flight	This 40-second video taken January 26, 2004 shows the X-43A captive-carry flight on the B-52 mothership.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1MtCUNtCTXQ">https://youtu.be/1MtCUNtCTXQ</a>	X-43A Hyper-X First Launch	This 28-second video taken June 2, 2001 shows the X-43A first launch from the B-52 mothership.  To learn more about the X-43A / Hyper-X visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tyUDWDrV_2M">https://youtu.be/tyUDWDrV_2M</a>	First B-52 Captive Flight of X-43A Pegasus Stack	This 59-second video taken June 2, 2001 shows the first flight of NASA's B-52 with the X-43A/Pegasus Stack attached. There is no release of the Hyper-X in this video.  To learn more about the X-43A visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-040-DFRC.html</a>	<a href="#">Transcript Link</a>

2017 07 18 NASA Armstrong Flight Research Center <https://youtu.be/R4LoR8dAV78> Sturckow Recaps Last Shuttle Mission to Land at Edwards When Space Shuttle Discovery touched down at Edwards Air Force Base in Southern California on Sept. 11, 2009 to conclude mission STS-128, no one could have foreseen that it would be the last of 54 such landings at the famed desert air base. [Transcript Link](#)

NASA astronaut and STS-128 commander Rick "C.J." Sturckow returned to NASA's Dryden (now Armstrong) Flight Research Center at Edwards recently to recap the 13-day supply mission to the International Space Station for Dryden employees. Sturckow noted that the station is contributing to both scientific understanding and future solar system exploration.

Fifteen of Discovery's 39 missions landed at Edwards, the remainder at NASA's Kennedy Space Center in Florida. The retired Space Shuttle is now enshrined at the Smithsonian National Air and Space Museum's Udvar-Hazy Center near Washington, D.C.

Duration: 1:37 seconds

2017 07 18 NASA Armstrong Flight Research Center [https://youtu.be/Wu3CI\\_YGNfl](https://youtu.be/Wu3CI_YGNfl) Prototype Space Shuttle Enterprise Unveiled at Intrepid Museum The Intrepid Air, Sea, and Space Museum in New York's harbor opened its Space Shuttle Pavilion July 18-22, 2012 with the prototype Space Shuttle Enterprise unveiled as its star attraction. NASA administrator Charlie Bolden joined museum officials and three of the four original Enterprise pilots at a ceremony on Intrepid's flight deck. [Transcript Link](#)

The four-day 'SpaceFest' featured numerous NASA exhibits along with educational demonstrations honoring NASA's aeronautics and space exploration past, present, and future.

Duration: 49 seconds

2017 07 18 NASA <https://youtu.be/am5tBJZzwQ> Space Shuttle Discovery - Early Morning Landing on Runway 22 at Edwards AFB This 36-second video taken August 9, 2005 shows Space Shuttle Discovery concluding STS-114 and landing safely at NASA's Dryden Flight Research Center (now Armstrong) at Edwards Air Force Base in California following the successful 14-day Return-to-Flight mission. [0](#)

During their two weeks in space, Commander Eileen Collins and her six crewmates tested out new safety procedures and delivered supplies and equipment the International Space Station.

Discovery spent two weeks in space, where the crew demonstrated new methods to inspect and repair the Shuttle in orbit. The crew also delivered supplies, outfitted, and performed maintenance on the International Space Station. A number of these tasks were conducted during three spacewalks.

In an unprecedented event, spacewalkers were called upon to remove protruding gap fillers from the heat shield on Discovery's underbelly. In other spacewalk activities, astronauts installed an external platform onto the Station's Quest Airlock and replaced one of the orbital outpost's Control Moment Gyroscopes.

Inside the Station, the STS-114 crew conducted joint operations with the Expedition 11 crew. They unloaded fresh supplies from the Shuttle and the Raffaello Multi-Purpose Logistics Module. Before Discovery undocked, the crews filled Raffaello with unneeded items and returned to Shuttle payload bay.

2017 07 18 NASA <https://youtu.be/D8SBSFa4pHM> Space Shuttle Discovery's Approach Captured by Long-Range Infrared Camera This 43-second video taken on August 9, 2005 with a long-range infrared camera shows Space Shuttle Discovery safely landing at NASA's Dryden Flight Research Center (now Armstrong) at Edwards Air Force Base in California following the very successful 14-day STS-114 Return to Flight mission. [0](#)

During their two weeks in space, Commander Eileen Collins and her six crewmates tested out new safety procedures and delivered supplies and equipment the International Space Station.

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2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xxV_Tc3rUkw">https://youtu.be/xxV_Tc3rUkw</a>	Time-Lapse Video of Shuttle Atlantis Undergoing Ferry Flight Preparations in Mate-DeMate Device	This 1-minute, 45-second video taken in May and June of 2009 shows time-lapse footage of Space Shuttle Atlantis undergoing post-mission servicing and ferry flight preparations in NASA Dryden (now Armstrong) Flight Research Center's Mate-DeMate Device after the conclusion of STS-125.	<a href="#">0</a>
				Atlantis' astronauts repaired and upgraded the Hubble Space Telescope, conducting five spacewalks during their mission to extend the life of the orbiting observatory. They successfully installed two new instruments and repaired two others, bringing them back to life, replaced gyroscopes and batteries, and added new thermal insulation panels to protect the orbiting observatory. The result is six working, complementary science instruments with capabilities beyond what was available and an extended operational lifespan until at least 2014.	
				With the newly installed Wide-Field Camera, Hubble will be able to observe in ultraviolet and infrared spectrums as well as visible light, peer deep onto the cosmic frontier in search of the earliest star systems and study planets in the solar system. The telescope's new Cosmic Origins Spectrograph will allow it to study the grand-scale structure of the universe, including the star-driven chemical evolution that produce carbon and the other elements necessary for life.	
				To learn more about STS-125 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts125/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts125/main/index.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4gyUEp0nrll">https://youtu.be/4gyUEp0nrll</a>	Atlantis Lands at Edwards AFB to Conclude Hubble Space Telescope Mission	This 1-minute, 7-second video shows Space Shuttle Atlantis landing at Edwards Air Force Base in California's Mojave Desert at the conclusion of NASA's STS-125 mission to upgrade the Hubble Space Telescope.	<a href="#">0</a>
				Atlantis' astronauts repaired and upgraded the Hubble Space Telescope, conducting five spacewalks during their mission to extend the life of the orbiting observatory. They successfully installed two new instruments and repaired two others, bringing them back to life, replaced gyroscopes and batteries, and added new thermal insulation panels to protect the orbiting observatory. The result is six working, complementary science instruments with capabilities beyond what was available and an extended operational lifespan until at least 2014.	
				With the newly installed Wide-Field Camera, Hubble will be able to observe in ultraviolet and infrared spectrums as well as visible light, peer deep onto the cosmic frontier in search of the earliest star systems and study planets in the solar system. The telescope's new Cosmic Origins Spectrograph will allow it to study the grand-scale structure of the universe, including the star-driven chemical evolution that produce carbon and the other elements necessary for life.	
				To learn more about STS-125 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts125/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts125/main/index.html</a>	

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XN_MJayugLY">https://youtu.be/XN_MJayugLY</a>	Time-lapse Video of Space Shuttle Endeavour Being Mated to NASA's 747 Shuttle Carrier Aircraft	<p>This 69-second time-lapse video taken in December of 2008 shows Space Shuttle Endeavour being lifted and mated atop a NASA 747 Shuttle Carrier Aircraft (SCA) in the Mate-Demate Device at Dryden Flight Research Center (now Armstrong), Edwards, CA.</p> <p>Shuttle Endeavour was being prepared for transport back to Kennedy Space Center in Florida.</p> <p>For more information on the Mate De-Mate Device, click here:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-014-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-014-DFRC.html</a></p>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pVoEwo5tb00">https://youtu.be/pVoEwo5tb00</a>	Endeavour Departs Edwards AFB for Ferry Flight Back to Kennedy Space Center	<p>This 1-minute, 10-second video taken on December 10, 2008 shows Space Shuttle Endeavour mounted to NASA's 747 Shuttle Carrier Aircraft (SCA) at NASA's Dryden (now Armstrong) Flight Research Center in California. The aircraft then departed Edwards AFB for ferry flight back to Kennedy Space Center after the successful conclusion of STS-126.</p> <p>Endeavour carried a reusable logistics module to the International Space Station that held supplies and equipment, including additional crew quarters, additional exercise equipment, equipment for the regenerative life support system, and spare hardware.</p> <p>STS-126 was the 27th shuttle mission to the International Space Station.</p> <p>To learn more about STS-126 visit:  <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html</a></p>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/uGEMEIA9kPw">https://youtu.be/uGEMEIA9kPw</a>	STS-126 Pilot Eric Boe Reflects on Endeavour's Approach and Landing at Edwards AFB	<p>This 2-minute, 38-second video taken December 1, 2008 features STS-126 pilot Eric Boe reflecting on Endeavour's approach and landing at Edwards Air Force Base at the conclusion of STS-126.</p> <p>Endeavour carried a reusable logistics module to the International Space Station that held supplies and equipment, including additional crew quarters, additional exercise equipment, equipment for the regenerative life support system, and spare hardware.</p> <p>STS-126 was the 27th shuttle mission to the International Space Station.</p> <p>To learn more about STS-126 visit:  <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html</a></p> <p>To learn more about the Space Shuttles and Dryden Flight Research Center visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a></p>	<a href="#">0</a>

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gqWYM3tda2M">https://youtu.be/gqWYM3tda2M</a>	Space Shuttle Endeavour Landing at Edwards Concluding STS- 126	This 61-second video taken November 30, 2008 shows Space Shuttle Endeavour landing at Edwards Air Force Base in California's Mojave Desert after successfully completing STS-126.	<a href="#">Transcript Link</a>
				Endeavour carried a reusable logistics module to the International Space Station that held supplies and equipment, including additional crew quarters, additional exercise equipment, equipment for the regenerative life support system and spare hardware.	
				STS-126 was the 27th shuttle mission to the International Space Station.	
				To learn more about STS-126 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts126/main/index.html</a>	
				To learn more about the Space Shuttles and Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rI3lusxbzI">https://youtu.be/rI3lusxbzI</a>	Transport of Space Shuttle Crew During a Joint NASA and Air Force Training Exercise	This 44-second video shows Air Force and NASA Dryden (now Armstrong) Flight Research Center personnel conducting a Space Shuttle crew rescue / recovery training exercise on the temporary runway at Edwards Air Force Base on July 26, 2008.	<a href="#">0</a>
				The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuate injured crew members.	
				Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.	
				To learn more about the Space Shuttles and Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/n-SPpfMeQQ">https://youtu.be/n-SPpfMeQQ</a>	Extraction of Space Shuttle Crew During a Joint NASA and Air Force Training Exercise	This 41-second video shows Air Force and NASA Dryden (now Armstrong) Flight Research Center personnel conducting a Space Shuttle crew rescue / recovery training exercise on the temporary runway at Edwards Air Force Base on July 26, 2008.	<a href="#">0</a>
				The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuate injured crew members.	
				Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.	

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/f9VTASUmzto">https://youtu.be/f9VTASUmzto</a>	Approach of Fire Rescue Crew During a Shuttle Emergency Training Exercise	<p>This 37-second video shows Air Force and NASA Dryden (now Armstrong) Flight Research Center personnel conducting a Space Shuttle crew rescue / recovery training exercise on the temporary runway at Edwards Air Force Base on July 26, 2008.</p> <p>The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuate injured crew members.</p> <p>Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.</p>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OmXgKYJTI7s">https://youtu.be/OmXgKYJTI7s</a>	Early morning Takeoff of Space Shuttle Atlantis from Edward AFB, California Atop NASA's 747	<p>This 41-second video shows space shuttle Atlantis atop NASA's 747 Shuttle Carrier Aircraft (SCA) during an early morning takeoff from Edward Air Force Base in Southern California's Mojave Desert. The SCA was transporting Atlantis back to Kennedy Space Center in Florida after the conclusion of STS-117, a successful 14-day mission to the International Space Station.</p> <p>To learn more about STS-117 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html</a></p> <p>To learn more about the Space Shuttles and Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a></p>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/k6VM-l4Tg">https://youtu.be/k6VM-l4Tg</a>	STS-117 Crew Transport Vehicle Moves Away from Space Shuttle Atlantis	<p>This 1-minute, 12-second video taken June 22, 2007 shows the Crew Transport Vehicle pulling away from the Space Shuttle Atlantis at Edward AFB, CA after the completion of a successful mission to the International Space Station on STS-117.</p> <p>NASA used the Space Shuttle program's Crew Transport Vehicle, or CTV, to transfer astronauts from Shuttle orbiters to Dryden (now Armstrong) Flight Research Center's medical facilities when they landed at Edwards Air Force Base.</p> <p>Flight surgeons performed basic medical checkups on astronauts inside the CTV. The vehicle, acquired in 1990, is a former people mover from Dulles Airport in Virginia. The mover's interior was modified to accomplish its role as a mobile medical facility.</p> <p>To learn more about STS-117 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html</a></p> <p>To learn more about the Space Shuttles and Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a></p>	<a href="#">0</a>

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Rdvg-uS08z8">https://youtu.be/Rdvg-uS08z8</a>	STS-117 Piggyback Takeoff of Space Shuttle Atlantis and 747 from Edwards AFB, CA	This 1-minute, 11-second video taken on July 1, 2007 shows Space Shuttle Atlantis atop NASA's 747 Shuttle Carrier Aircraft (SCA) and taking off from Edward AFB, CA after successfully completing STS-117, a 14-day mission to the International Space Station (ISS).	<a href="#">Q</a>
				To learn more about STS-117 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html</a>	
				To learn more about the Space Shuttles and Dryden (now Armstrong) Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xjSGi7fjED8">https://youtu.be/xjSGi7fjED8</a>	STS-117 Space Shuttle Atlantis Lands in California	This 1-minute, 19-second video taken June 22, 2007 shows Space Shuttle Atlantis completing mission STS-117 and descending to a smooth landing at Edwards Air Force Base, in California's Mojave Desert with commander Rick Sturckow and pilot Lee Archambault at the controls.	<a href="#">Transcript Link</a>
				To learn more about STS-117 visit: <a href="https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html">https://www.nasa.gov/mission_pages/shuttle/shuttlemissions/sts117/main/index.html</a>	
				To learn more about the Space Shuttles and Dryden (now Armstrong) Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kG3DIZFLaCl">https://youtu.be/kG3DIZFLaCl</a>	Triage Assessment of Space Shuttle Crew During a Joint NASA Air Force Training Exercise	This 5-minute movie clip shows personnel from NASA's Dryden (now Armstrong) Flight Research Center and Edwards Air Force Base conducting a training exercise on May 5, 2007, that would enable them to handle the rescue of a Space Shuttle crew if a landing mishap at the base occurred.	<a href="#">Q</a>
				The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuating injured crew members.	
				Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.	

2017 07 18 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/EDeEuqjvpjw> Convoy of Rescue and Support Vehicles During a Joint NASA Air Force Training Exercise

This 41-second movie clip shows personnel from NASA's Dryden (now Armstrong) Flight Research Center and Edwards Air Force Base conducting a training exercise on May 5, 2007, that would enable them to handle the rescue of a Space Shuttle crew if a landing mishap occurred at the base.

[0](#)

The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuating injured crew members.

Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.

To learn more about the Space Shuttles and Dryden Flight Research Center (now Armstrong) visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html>

2017 07 18 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/Z1mjFr7JM0> Evacuation and Airlift of Space Shuttle Crew Training Exercise

This 61-second video shows personnel from NASA's Dryden Flight Research Center (now Armstrong) and Edwards Air Force Base conducting a training exercise on May 5, 2007, that would enable them to handle the rescue of a Space Shuttle crew if a landing mishap occurred at the base.

[Transcript Link](#)

The exercises were held periodically to train Air Force fire/rescue and medical crews to aid the Shuttle crew in exiting the Shuttle after a simulated landing mishap on or near the Edwards runway, escaping from the mishap area, and after triage assessment, safely evacuating injured crew members.

Although NASA's Kennedy Space Center in Florida was the primary landing site for Space Shuttle missions, Edwards AFB remained the primary alternate landing site if weather or other situations precluded Florida as a landing option.

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<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html>

2017 07 18 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/bdC6jxPLM04> Former NASA Pilot Tom McMurtry Comments on Future of Space and Aeronautics

On April 10, 2006, nine present and retired NASA and Air Force employees gathered in the empty fuselage of NASA's modified 747 Shuttle Carrier Aircraft (SCA) to share their remembrances of the first Space Shuttle landing (STS-1) at Dryden (now Armstrong) Flight Research Center.

[0](#)

This 45-second video features comments by retired NASA and Air Force research test pilot Tom McMurtry on the enthusiasm and commitment of future generations to the fields of aviation, aeronautics, and space exploration.

2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/63ltR9avmbo">https://youtu.be/63ltR9avmbo</a>	Retired Shuttle Support Operations Lead Joe D'Agostino Comments on STS-1 Landing at Edwards	On April 10, 2006, nine present and retired NASA Dryden (now Armstrong) Flight Research Center and Air Force employees gathered in the empty fuselage of NASA's modified 747 Shuttle Carrier Aircraft (SCA) to share their remembrances the first Space Shuttle landing (STS-1) at Dryden Flight Research Center.  This 38-second video features comments from retired Shuttle Support Operations Lead, Joe D'Agostino, about the importance of the first Space Shuttle landing (Columbia, STS-1) at Edwards Air Force Base. D'Agostino emphasized the importance of the role the Space Shuttle program played in Antelope Valley residents' lives in California's Mojave Desert.	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/FDU_uh-kjLc">https://youtu.be/FDU_uh-kjLc</a>	Retired NASA Engineer Jenny Baer-Reidhart Comments on STS-1 Landing at Edwards	On April 10, 2006, nine present and retired NASA Dryden (now Armstrong) Flight Research Center and Air Force employees gathered in the empty fuselage of NASA's modified 747 Shuttle Carrier Aircraft (SCA) to share their remembrances the first Space Shuttle landing (STS-1) at Dryden Flight Research Center.  This 1-minute, 6-second video features comments from retired NASA engineer and Public Affairs director Jenny Baer-Reidhart on the approach and first landing of Space Shuttle Columbia (STS-1) at Edwards Air Force Base in Southern California's Mojave Desert.  To learn more about the Space Shuttles and Dryden Flight Research Center (now Armstrong) visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vs3ZvmDmVq0">https://youtu.be/vs3ZvmDmVq0</a>	Retired NASA Pilot Fitz Fulton Comments on 747 Columbia Crosswind Landing at KSC	On April 10, 2006, nine present and retired NASA Dryden (now Armstrong) Flight Research Center and Air Force employees gathered in the empty fuselage of NASA's modified 747 Shuttle Carrier Aircraft (SCA) to share their remembrances the first Space Shuttle landing (STS-1) at Dryden Flight Research Center.  This 1-minute, 8-second video features comments on the 747SCA/Columbia ferry flight following STS-1 and the crosswind landing encountered at Kennedy Space Center from retired NASA and Air Force pilot Fitz Fulton.  To learn more about the Space Shuttles and Dryden Flight Research Center (now Armstrong) visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">0</a>
2017 07 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OHmuTz9PJ3U">https://youtu.be/OHmuTz9PJ3U</a>	Dryden Prepares Discovery for Ferry Flight back to KSC (Complete)	This 5-minute video from August of 2005 shows NASA's 747 Shuttle Carrier Aircraft (SCA) and Space Shuttle Discovery STS-114.  The Shuttle and 747SCA were at NASA's Dryden (now Armstrong) Flight Research being prepared for return to Kennedy Space Center in Florida after a night landing at Edwards Air Force Base in California.  To learn more about the Space Shuttles and Dryden Flight Research Center (now Armstrong) visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/DWi3Hh1OoY8">https://youtu.be/DWi3Hh1OoY8</a>	Dryden Prepares Discovery for Ferry Flight back to KSC - Part 6	This 52-second video from August of 2005 shows the takeoff of NASA's 747 Shuttle Carrier Aircraft (SCA) and Space Shuttle Discovery STS-114 at Edwards Air Force Base in California.  After being prepped for flight at NASA's Dryden (now Armstrong) Flight Research Center, the 747SCA lifted off for the return flight to Kennedy Space Center in Florida.  For information on the Space Shuttles and NASA Dryden, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1ohJepXXrSg">https://youtu.be/1ohJepXXrSg</a>	Dryden Prepares Discovery for Ferry Flight back to KSC - Part 5	This 33-second movie clip shows Space Shuttle Discovery being loaded onto NASA's 747 Shuttle Carrier Aircraft (SCA) in the Mate-DeMate Device (MDD) at Dryden (now Armstrong) Flight Research Center in Southern California.  For more information on Dryden's role in the Space Shuttles, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9nldINPMTp8">https://youtu.be/9nldINPMTp8</a>	Dryden Prepares Discovery for Ferry Flight back to KSC - Part 4	This 63-second video from August of 2005 shows preparation of Space Shuttle Discovery for loading onto NASA's 747 Shuttle Carrier Aircraft (SCA) in the Mate-DeMate Device (MDD) at Dryden Flight Research Center (now Armstrong).  For more information on Dryden's role in the Space Shuttle, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/L8-9dwR8DIw">https://youtu.be/L8-9dwR8DIw</a>	Dryden Prepares Discovery for Ferry Flight Back to KSC - Part 3	This 51-second video from August of 2005 shows Space Shuttle Discovery being hoisted onto the Mate-DeMate Device (MDD) at NASA Dryden Flight Research Center (now Armstrong) in California.	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jD17ean8UY8">https://youtu.be/jD17ean8UY8</a>	Dryden Prepares Discovery for Ferry Flight back to KSC - Part 2	This 66-second video taken in August of 2005 shows the post-landing activities following the landing of Space Shuttle Discovery on STS-114. The video includes the Shuttle crew's inspection of the orbiter's exterior.	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/dPiotXfRZYg">https://youtu.be/dPiotXfRZYg</a>	Dryden Prepares Discovery for Ferry Flight back to KSC - Part 1	This 43-second video from August of 2005 uses infrared photography to show the night landing of Space Shuttle Discovery (STS-114) at Edwards Air Force Base in Southern California.	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZzXGyRMzk">https://youtu.be/ZzXGyRMzk</a>	Shuttle Solid Rocket Booster Parachute Test	This 22-second video from the 1980's shows a Shuttle Solid Rocket Booster being carried by the B-52 mothership for a parachute test.  The test was carried out at NASA's Dryden Flight Research Center (now Armstrong) at Edwards Air Force Base, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/NLixQTEbwjg">https://youtu.be/NLixQTEbwjg</a>	Shuttle Landing on Lakebed at Edwards Air Force Base	This 25-second video from 1981 shows the Space Shuttle Columbia landing on the lakebed at Edwards Air Force Base in California's Mojave Desert.  For more information on NASA's Dryden (now Armstrong) Flight Research Center and the Space Shuttle program, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QEVIZLfrGBw">https://youtu.be/QEVIZLfrGBw</a>	Shuttle Night Landing at Edwards Air Force Base	This 19-second video from 1981 shows a Space Shuttle landing at night on the runway at Edwards Air Force Base.  For more information on NASA's Dryden (now Armstrong) Flight Research Center and the Space Shuttle program, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TXgQJXPAjQE">https://youtu.be/TXgQJXPAjQE</a>	Columbia Post- flight Activity on Runway at Edwards Air Force Base	This 44-second video from 1981 shows post-flight activity including the approach of a large entourage of support vehicles after the Space Shuttle Columbia lands at Edwards Air Force Base in California's Mojave Desert.  For more information on NASA's Dryden (now Armstrong) Flight Research Center and the Space Shuttle program, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ohUkN2teWOI">https://youtu.be/ohUkN2teWOI</a>	STS-111 Space Shuttle Endeavour Returning from ISS Mission	This 40-second video taken June 19, 2002 shows the Space Shuttle Endeavour as it touches down at Edwards Air Force Base. Heralded by its signature double sonic booms, the Space Shuttle Endeavour dropped through cloudless skies to land at Edwards Air Force Base, California concluding an almost 14-day mission STS-111 to the International Space Station (ISS).  The mission was the 14th construction, supply, and crew exchange mission to the station, bringing the Expedition Five crew to the orbital laboratory and returning the Expedition Four crew -- Yuri Onufrienko, Dan Bursch, and Carl Walz -- back to Earth. Bursch and Walz set a new American record for single-mission longevity in space of 195 days during their stay aboard the station.  The STS-111 crew was led by commander Ken Cockrell, who was assisted by Shuttle pilot Paul Lockhart and mission specialists Franklin Chang-Diaz and Philippe Perrin. Chang-Diaz and Perrin completed installation of the mobile base platform for the station's robot arm, replaced the arm's wrist-roll joint and completed several other tasks during three spacewalks on STS-111.  For more information on NASA's Dryden (now Armstrong) Flight Research Center and the Space Shuttle program, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>	<a href="#">Transcript Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9zu6gReRV98">https://youtu.be/9zu6gReRV98</a>	STS-1 The First Space Shuttle Mission, April 12- 14, 1981	Space Shuttle Columbia launched on the first Space Shuttle mission on April 12, 1981, a two-day demonstration of the first reusable, piloted spacecraft's ability to go into orbit and return safely to Earth. This 2-minute, 43-second video depicts the historic launch, in-orbit activity by astronauts John Young and Bob Crippen, and the vast crowds who witnessed the landing on Runway 23 on Rogers Dry Lake at Edwards Air Force Base, CA, on April 14, 1981.	<a href="#">Transcript</a> <a href="#">Link</a>	
				After years of testing of Columbia and training the astronauts in simulators, the orbiter lifted off into space from the Kennedy Space Center on Florida's east coast, boosted by seven million pounds of thrust supplied by its solid-propellant rockets and liquid hydrogen fueled engines. The flight, one of four orbital flight tests by Columbia, served as a two-day flight demonstration of the first reusable, piloted spacecraft's ability to go into orbit and return safely to Earth.		
				Columbia carried as its main payload a developmental flight instrumentation pallet with instruments to record pressures, temperatures, and levels of acceleration at various points on the vehicle during launch, flight, and landing. In flight, Young and Crippen tested the spacecraft's on-board systems, fired the orbital maneuvering system for changing orbits, employed the reaction control system for controlling attitude, and opened and closed the payload doors. One of many cameras aboard -- a remote television camera -- revealed some of the thermal protection tiles had detached from the orbiter during launch.		
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rdDCGWZV61k">https://youtu.be/rdDCGWZV61k</a>	STS-92 Discovery Ferry Flight Leaving Dryden	This 45-second video taken November 2, 2002 shows the 747 Shuttle Carrier Aircraft (SCA) with Discovery attached rolling down the runway, lifting off, retracting its gear, and departing Dryden Flight Research Center (now Armstrong) on a ferry flight back to Kennedy Space Flight Center in Florida.	<a href="#">Transcript</a> <a href="#">Link</a>	
				To learn more about the Space Shuttles and Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>		
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Q0CuLWlnj6Q">https://youtu.be/Q0CuLWlnj6Q</a>	Space Shuttle Landings at Dryden	This 34-second video from 1992 shows several shuttle landings on both the main runway at Edwards AFB and Rogers Dry Lakebed.	<a href="#">Transcript</a> <a href="#">Link</a>	
				To learn more about the Space Shuttle landings at Dryden Flight Research Center visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-015-DFRC.html</a>		

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2aC5WlFtkig">https://youtu.be/2aC5WlFtkig</a>	STS Approach and Landing Test, Pilot-induced Oscillation	This 21-second video taken October 26, 1977 shows the Space Shuttle prototype Enterprise experiencing a Pilot-Induced Oscillation (PIO) during the Approach and Landing Tests (ALT) at Dryden Flight Research Center (now Armstrong).	<a href="#">Transcript Link</a>
				<p>During 1977 the NASA Dryden Flight Research Center, Edwards, CA, hosted the Approach and Landing Tests for the Space Shuttle prototype Enterprise. Since the shuttles would land initially on Rogers Dry Lakebed adjacent to Dryden on Edwards Air Force Base, NASA had already modified a Boeing 747 to carry them back to their launch site at Kennedy Space Center, FL. Computer calculations and simulations had predicted the mated shuttle and 747 could fly together safely, but NASA wanted to verify that prediction in a controlled flight-test environment before the shuttles went into operation. The Agency also wanted to glide test the orbiter to ensure it could land safely before sending it into space with human beings aboard.</p> <p>NASA's Johnson Space Center, Houston, TX, developed a three-phase test program. First, an unpiloted-captive phase tested the shuttle/747 combination without a crew on the Enterprise in case of a problem that required jettisoning the prototype. There were three taxi tests and five flight tests without a crew in the shuttle. That phase ended on March 2, 1977. The second or captive-active phase completed on July 26, 1977, flew the orbiter mated to the 747 with a two-person crew inside. Finally there were five flights completed on October 26, 1977, in which the orbiter separated from the</p>	
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OoljVfbWkSA">https://youtu.be/OoljVfbWkSA</a>	Mini-Sniffer Test Flight Over Rogers Dry Lake	This 1-minute, 21-second video from 1975 shows flight and landing of the Mini-Sniffer remotely controlled, propeller-driven vehicle.	<a href="#">Transcript Link</a>
				<p>Mini-Sniffer was the first effort to build a high-altitude remotely piloted research vehicle for both Earth atmospheric studies and for possible use as a Mars aircraft. It was flown under radio control by an operator riding in the back of a pickup truck. Another vehicle carried the data recording equipment.</p> <p>The Mini-Sniffer was a remotely controlled, propeller-driven vehicle developed at NASA Dryden Research Center (now Armstrong) to sample the upper atmosphere for pollution. The Mini-Sniffer represents one of the earliest attempts by NASA to monitor the Earth's atmosphere at high altitudes and was also considered for planetary atmospheric sampling flights over Mars. There were three Mini-Sniffers built. The original Mini-Sniffer was propelled by a small air-breathing engine, while a later version employed a non-airbreathing hydrazine engine for higher altitude capabilities. A large propeller was also employed because of its effectiveness in the thin upper atmosphere.</p> <p>For more information on the Mini-Sniffer, visit: <a href="https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/Mini-Sniffer/index.html">https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/Mini-Sniffer/index.html</a></p>	

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1OI-vinJ7-U">https://youtu.be/1OI-vinJ7-U</a>	Mini-Sniffer Flight and Landing	<p>This 45-second video taken in 1976 shows the flight and landing of the Mini-Sniffer remotely controlled, propeller-driven vehicle.</p> <p>The Mini-Sniffer was a remotely controlled, propeller-driven vehicle developed at NASA Dryden Research Center (now Armstrong) to sample the upper atmosphere for pollution. The Mini-Sniffer represents one of the earliest attempts by NASA to monitor the Earth's atmosphere at high altitudes and was also considered for planetary atmospheric sampling flights over Mars.</p> <p>There were three Mini-Sniffers built. The original Mini-Sniffer was propelled by a small air-breathing engine, while a later version employed a non-airbreathing hydrazine engine for higher altitude capabilities. A large propeller was also employed because of its effectiveness in the thin upper atmosphere.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/m0MmygHZ6LU">https://youtu.be/m0MmygHZ6LU</a>	Preflight and takeoff of Mini- Sniffer	<p>This 37-second video shows pre-flight and takeoff of the Mini-Sniffer remotely controlled, propeller-driven vehicle.</p> <p>The Mini-Sniffer was a remotely controlled, propeller-driven vehicle developed at NASA Dryden Research Center (now Armstrong) to sample the upper atmosphere for pollution. The Mini-Sniffer represents one of the earliest attempts by NASA to monitor the earth's atmosphere at high altitudes and was also considered for planetary atmospheric sampling flights over Mars.</p> <p>There were three Mini-Sniffers built. The original Mini-Sniffer was propelled by a small air-breathing engine, while a later version employed a non-airbreathing hydrazine engine for higher altitude capabilities. A large propeller was also employed because of its effectiveness in the thin upper atmosphere.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/AM4R2K7HqOg">https://youtu.be/AM4R2K7HqOg</a>	L-1011 Airliner Wing Vortice Tests at NASA Langley Research Center	<p>This 58-second video from the 1970's shows an L-1011 Airliner Wing Vortice test at NASA Langley Research Center.</p> <p>NASA conducted the Adaptive Performance Optimization experiment aboard Orbital Sciences Corporation's d-100. The program was developed by engineers at the Dryden (now Armstrong) Flight Research Center. Dryden was also involved in limited wake vortex studies using an L-1011 in 1977.</p> <p>The Adaptive Performance Optimization project was designed to reduce the aerodynamic drag of large subsonic transport aircraft by varying the camber of the wing through real-time adjustment of flaps or ailerons in response to changing flight conditions. Reducing the drag would improve aircraft efficiency and performance, resulting in significant fuel savings for the nation's airlines worth hundreds of millions of dollars annually.</p> <p>Flights for the NASA experiment occurred periodically over the next couple of years on the modified wide-bodied jetliner, with all flights flown out of Bakersfield's Meadows Field. The experiment was part of Dryden's Advanced Subsonic Transport Aircraft Research program.</p> <p>Dryden conducted extensive wake vortice tests beginning in the 1970's. These wake vortices first became a serious concern when large jetliners were first introduced. The aircraft trailed vortices, created by any large-bodied aircraft, were powerful enough to</p>	<a href="#">Transcript Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/y-abcG8eRyo">https://youtu.be/y-abcG8eRyo</a>	Hyper III Model Drop Test	<p>This 53-second video from 1969 shows a Hyper III model drop test from a remote control airplane.</p> <p>The Hyper III was a full-scale lifting body remotely piloted vehicle (RPRV) designed by engineer Dale Reed and built at what was then the NASA Flight Research Center (now Armstrong) located at Edwards Air Force Base in Southern California.</p> <p>For more information on Hyper III visit: <a href="https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/HyperIII/index.html">https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/HyperIII/index.html</a></p>	<a href="#">Transcript Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pwdClhh1HwE">https://youtu.be/pwdClhh1HwE</a>	Hyper III Drop Test From SH-3 Helicopter	<p>This 53-second video from December 12, 1969 shows a Hyper III drop test from an SH-3 helicopter.</p> <p>The Hyper III was a full-scale lifting body remotely piloted vehicle (RPRV) designed by engineer Dale Reed and built at what was then the NASA Flight Research Center (now Armstrong) located at Edwards Air Force Base in Southern California.</p> <p>For more information on the Hyper III, visit: <a href="https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/HyperIII/index.html">https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/HyperIII/index.html</a></p>	<a href="#">Transcript Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EJs62wjm">https://youtu.be/EJs62wjm</a>	D-558-II Launching from B- 29 With Pilot Scott Crossfield	This 35-second video from the early 1950's shows pilot Scott Crossfield climbing into the cockpit of a Douglas D-558-II and performing a test flight after launching the aircraft from the B-29 mothership.	<a href="#">Transcript</a> <a href="#">Link</a>
				The test was performed at the National Advisory Committee for Aeronautics (NACA) High-Speed Flight Station (now the NASA Armstrong Flight Research Center) in California's Mojave Desert.	
				To learn more about the D-558-II Skyrocket visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html</a>	
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nlOWOX3H5t">https://youtu.be/nlOWOX3H5t</a>	D-558-II Preflight Preparations by Ground Crew	This 41-second video from the early 1950's shows preparation of the D-558-II Skyrocket for a test flight at National Advisory Committee for Aeronautic's (NACA) High-Speed Flight Station (now NASA Armstrong Flight Research Center) in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the D-558-II Skyrocket visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html</a>	
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/FD90UuPpaAo">https://youtu.be/FD90UuPpaAo</a>	X-40A Seventh Free Flight	This 40-second video from May 19, 2001 shows the lift off and release of the X-40A space maneuvering vehicle in its seventh flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, California.	<a href="#">Transcript</a> <a href="#">Link</a>
				The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation, and control software for its autonomous flight controls.	
				The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. Boeing built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 was being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.	

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/n-LmKOiaN1g">https://youtu.be/n-LmKOiaN1g</a>	X-40A Sixth Free Flight	<p>This 40-second video taken May 8, 2001 shows the lift off and release of the X-40A space maneuvering vehicle in its sixth flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, California.</p> <p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation, and control software for its autonomous flight controls.</p> <p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. Boeing built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 was being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oqDKlOfziQU">https://youtu.be/oqDKlOfziQU</a>	X-40A Fifth Free Flight	<p>This 40-second video taken May 8, 2001 shows the lift off and release of the X-40A space maneuvering vehicle in its fifth flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, California.</p> <p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation and control software for its autonomous flight controls.</p> <p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. The Boeing Company built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 was being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wn-0keg2bHk">https://youtu.be/wn-0keg2bHk</a>	X-40A Fourth Free Flight	This 40-second video taken May 4, 2001 shows the lift off and release of the X-40A space maneuvering vehicle in its fourth flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
<p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation and control software for its autonomous flight controls.</p>					
<p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. The Boeing Company built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 was being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>					
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/K_gUrWEzrng">https://youtu.be/K_gUrWEzrng</a>	X-40A Third Free Flight	This 40-second video taken April 12, 2001 shows the lift off and release of the X-40A space maneuvering vehicle for its third flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
<p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation, and control software for its autonomous flight controls.</p>					
<p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. The Boeing Company built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 is being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>					

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mf-GNbrs-mE">https://youtu.be/mf-GNbrs-mE</a>	X-40A Second Free Flight	<p>This 40-second video taken April 12, 2001 shows the lift off and release of the X-40A space maneuvering vehicle for its second flight at NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA.</p> <p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation, and control software for its autonomous flight controls.</p> <p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. The Boeing Company built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 is being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GjRNF-TVn3Q">https://youtu.be/GjRNF-TVn3Q</a>	X-40A First Free Flight	<p>This 40-second video taken April 4, 2001 shows the lift off and release of the X-40A space maneuvering vehicle in its first free flight at NASA's Dryden Flight Research Center (now Armstrong) in Edwards, CA.</p> <p>The X-40A was an 80-percent subscale version of the X-37 experimental autonomous spaceplane technology demonstrator, but lacking propulsion or thermal protection systems. The X-40A flew seven approach and landing test flights at NASA Dryden Flight Research Center in 2001 to reduce risk for the X-37 program, including in-flight evaluation of guidance, navigation, and control software for its autonomous flight controls.</p> <p>The craft was towed aloft by an Army CH-47D Chinook helicopter to an altitude of 15,000 feet, and then released to fly an autonomously controlled 75-second descent to a landing on the main runway at Edwards Air Force Base. Boeing built the X-40A originally for the Air Force as part of that service's Space Maneuver Vehicle program. It made one free flight in 1998 at Holloman Air Force Base in New Mexico before being loaned to NASA to aid the X-37 effort. The X-37 was being developed by Boeing for NASA to demonstrate advanced integrated technologies that would reduce the cost and risk of future reusable space launch vehicle systems.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BwCk3aUxjd4">https://youtu.be/BwCk3aUxjd4</a>	X-29 Flight Test With Spin Chute Deployed	This 28-second video from the late 1980's shows the X-29 performing a flight test over Edwards Air Force Base in California's Mojave Desert with its spin chute deployed.	<a href="#">Transcript</a> <a href="#">Link</a>
				Two X-29 aircraft, featuring one of the more unusual designs in aviation history, were flown at NASA Ames-Dryden Flight Research Facility (now Armstrong Flight Research Center) at Edwards Air Force Base, CA. The demonstrators investigated advanced concepts and technologies during a multi-phased program conducted from 1984 to 1992. The program provided an engineering database that is available for the design and development of future aircraft.	
				The aircraft's forward-swept wings were mounted well back on the fuselage, while its canards (horizontal stabilizers to control pitch) were in front of the wings instead of on the tail. The complex geometries of the wings and canards combined to provide exceptional maneuverability, supersonic performance, and a light structure. Air moving over the forward-swept wings tended to flow inward toward the root of the wing instead of outward toward the wing tip as occurs on an aft-swept wing. This reverse airflow kept the wing tips and their ailerons from stalling at high angles of attack (direction of the fuselage relative to the air flow).	
				The fighter-size X-29 also explored the use of advanced composites in aircraft construction; variable camber wing surfaces; the unique forward-swept wing and its thin supercritical airfoil; strake flaps; close-coupled canards; and a computerized fly-by-wire flight control	
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/O82wx4YN8So">https://youtu.be/O82wx4YN8So</a>	X-29 High Angle of Attack Flight	This 26-second video from 1992 shows the X-29 in a high angle of attack during a test flight over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				Two X-29 aircraft, featuring one of the more unusual designs in aviation history, were flown at NASA Ames-Dryden Flight Research Facility (now Armstrong Flight Research Center) at Edwards Air Force Base, CA. The demonstrators investigated advanced concepts and technologies during a multi-phased program conducted from 1984 to 1992. The program provided an engineering database that is available for the design and development of future aircraft.	
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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jlQkVJbFyqY">https://youtu.be/jlQkVJbFyqY</a>	Pilot Milt Thompson in the X-15 Simulator	This 30-second video from the early 1960's shows NASA flight test pilot Milt O. Thompson training in the X-15 flight simulator at the NASA Flight Research Center (now Armstrong).	<a href="#">Transcript Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
				<p>Manufactured by North American Aviation, Inc., three rocket-powered X-15s flew a total of 199 times, with North American (and former National Advisory Committee for Aeronautics or NACA) pilot Scott Crossfield making the first, unpowered glide flight on June 8, 1959. NASA's William H. Dana was the pilot for the final flight in the program on Oct. 24, 1968. All of these flights took place within what was called the "High Range" surrounding but mostly to the east of Edwards Air Force Base, CA, and NASA's Flight Research Center.</p>		
				<p>There were 10 other pilots in the program for a total of 12: five from NASA; five from the Air Force; one from the Navy; and one, Crossfield, from North American. Generally, pilots used one of two types of flight profiles a speed profile that called for the pilot to</p>		
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/LJzNSpLvMCw">https://youtu.be/LJzNSpLvMCw</a>	X-15A-2 Side View of Damage After Mach 6.7 Flight	This 32-second video from October 3, 1967 documents the damage to the side of the X-15A-2 hypersonic aircraft after William J. "Pete" Knight piloted the vehicle on a record breaking Mach 6.7 flight.	<a href="#">Transcript Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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				<p>There were 10 other pilots in the program for a total of 12: five from NASA; five from the Air Force; one from the Navy; and one, Crossfield, from North American. Generally, pilots used one of two</p>		

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SncLDXTiREY">https://youtu.be/SncLDXTiREY</a>	X-15A-2 - Damage After Record Setting Mach 6.7 Flight	This 48-second video taken on October 3, 1967 documents the damage to the X-15A-2 hypersonic aircraft after its record breaking Mach 6.7 flight with William J. "Pete" Knight as the pilot.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jftisC43ws">https://youtu.be/jftisC43ws</a>	X-15 Simulator Control Panel Test	This 32-second video from the 1960s shows a control panel test being performed at NASA's Flight Research Center (now Armstrong) on the X-15 simulator.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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2017 07 17 NASA Armstrong Flight Research Center <https://youtu.be/CIR-B966Dis> X-15 - Pre-landing Jettison of Auxiliary Propellants and Lower Ventral Fin This 52-second video from 1963 shows the X-15 approaching Edwards Air Force Base for a landing on Rogers Dry Lake. The video also highlights the jettison of the auxiliary propellants and lower ventral fin from the aircraft as it approaches the runway. [Q](#)

In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.

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2017 07 17 NASA Armstrong Flight Research Center <https://youtu.be/Vr1pNh9MW5I> Pre-launch Ignition of X-15 Rocket Engine This 32-second video from 1963 shows the pre-launch ignition of the X-15's rocket engine while still attached to the B-52 Mothership. [Transcript Link](#)

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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/exV8qipaOLg">https://youtu.be/exV8qipaOLg</a>	X-15 - View of Test Flight from Onboard Camera %231	This 41-second video from 1963 shows an onboard view of an X-15 hypersonic test flight from the perspective of its rear facing #1 camera.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7gKeWl9AuAA">https://youtu.be/7gKeWl9AuAA</a>	X-15 Taxi With Support Vehicles	This 32-second video from 1963 shows the X-15 hypersonic aircraft attached to the B-52 Mothership and taxiing on the runway at Edwards Air Force Base in preparation for a test flight over Mojave's California Desert. The video also shows a large entourage of support vehicles following the B-52 and X-15 as it prepares for takeoff.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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				<p>There were 10 other pilots in the program for a total of 12: five</p>		

2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1RAAQwCWSlc">https://youtu.be/1RAAQwCWSlc</a>	X-15 Landing on Rogers Dry Lake	This 27-second video taken January 2, 1966 shows the X-15 hypersonic aircraft approaching and landing on Rogers Dry Lake at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xUG5N9qDcY">https://youtu.be/xUG5N9qDcY</a>	X-15 Landing on Rogers Dry Lake	This 32-second video taken on April 26, 1968 shows the X-15 hypersonic aircraft approaching and landing on Rogers Dry Lake at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				<p>In the joint X-15 hypersonic research program that NASA conducted with the Air Force, the Navy, and North American Aviation, Inc., the aircraft flew over a period of nearly 10 years and set the world's unofficial speed and altitude records of 4,520 mph (Mach 6.7) and 354,200 feet in a program to investigate all aspects of piloted hypersonic flight. Information gained from the highly successful X-15 program contributed to the development of the Mercury, Gemini, and Apollo piloted spaceflight programs as well as the Space Shuttle program.</p>		
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2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RAjykpFrWgk">https://youtu.be/RAjykpFrWgk</a>	X-15A-2 Approach and Landing	<p>This 23-second video from 1967 shows the X-15A-2 approaching and landing at Edwards Air Force Base in California's Mojave Desert.</p> <p>In June 1967, the X-15A-2 rocket-powered research aircraft received a full-scale ablative coating to protect the craft from the high temperatures associated with hypersonic flight (above Mach 5). This pink eraser-like substance, applied to the X-15A-2 aircraft (56-6671), was then covered with a white sealant coat before flight. This coating would help the #2 aircraft reach the record speed of 4,520 mph (Mach 6.7).</p> <p>For more information on the X-15 visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XpHAzSkTaOM">https://youtu.be/XpHAzSkTaOM</a>	X-15A-2 Flight Test with External Fuel Tanks	<p>This 33-second video from 1967 shows the X-15A-2, with two external fuel tanks attached underneath its wings, being dropped from the B-52 Mothership and performing a test flight over California's Mojave Desert. In June 1967, the X-15A-2 rocket-powered research aircraft received a full-scale ablative coating to protect the aircraft from the high temperatures associated with hypersonic flight (above Mach 5).</p> <p>This pink eraser-like substance, applied to the X-15A-2 aircraft (56-6671), was then covered with a white sealant coat before flight. This coating would help the X-15A-2 aircraft reach a record speed of 4,520 mph (Mach 6.7).</p> <p>For more information on the X-15 visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-85UpeSOuc8">https://youtu.be/-85UpeSOuc8</a>	X-15A-2 Taxi and Takeoff	<p>This 32-second video from 1967 shows the taxi and takeoff of the B-52 Mothership carrying the X-15A-2 with external fuel tanks underneath its wing. In June 1967, the X-15A-2 rocket-powered research aircraft received a full-scale ablative coating to protect the aircraft from the high temperatures associated with hypersonic flight (above Mach 5).</p> <p>This pink eraser-like substance, applied to the X-15A-2 aircraft (56-6671), was then covered with a white sealant coat before flight. This coating would help the X-15A-2 aircraft reach a record speed of 4,520 mph (Mach 6.7).</p> <p>For more information on the X-15 visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-052-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xblI5AXGPQg">https://youtu.be/xblI5AXGPQg</a>	KC-135A Winglet Test Flight	This 30-second video from the mid-1970's shows a KC-135 Stratotanker undergoing a winglet test flight over California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				The Boeing KC-135 Stratotanker, besides being used extensively in its primary role as an in-flight aircraft refueler, has assisted in several projects at the NASA Dryden Flight Research Center, Edwards, CA.	
				In 1957 and 1958, Dryden was asked by what was then the Civil Aeronautics Administration (later absorbed into the Federal Aviation Administration (FAA) in 1958) to help establish new approach procedure guidelines on cloud-ceiling and visibility minimums for Boeing's first jet airliner, the B-707. Dryden used a KC-135, the military variant of the 707, to aid the CAA in these tests.	
				In 1979 and 1980, Dryden was again involved with general aviation research with the KC-135. This time, a special wingtip "winglet", developed by Richard Whitcomb of Langley Research Center, was tested on the jet aircraft. Winglets are small, nearly vertical fins installed on an airplane's wing tips to help produce a forward thrust in the vortices that typically swirl off the end of the wing, thereby reducing drag. This winglet idea was tested at the Dryden Flight Research Center on a KC-135A tanker loaned to NASA by the Air Force. The research showed that the winglets could increase an aircraft's range by as much as 7 percent at cruise speeds. The first application of NASA's winglet technology in industry was in general	
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/VZ6M Misfw3M">https://youtu.be/VZ6M Misfw3M</a>	KC-135A Winglet Test Flight Takeoff	This 47-second video from the mid-1970's shows a KC-135 Stratotanker taking off from Edwards Air Force Base for winglet test flight.	<a href="#">Transcript</a> <a href="#">Link</a>
				The Boeing KC-135 Stratotanker, besides being used extensively in its primary role as an in-flight aircraft refueler, has assisted in several projects at the NASA Dryden Flight Research Center, Edwards, California.	
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2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aSxFe93pYCA">https://youtu.be/aSxFe93pYCA</a>	Super Guppy Swallows T-38s; Heads for El Paso	Two NASA T-38 aircraft were swallowed whole on March 26, 2013 by NASA's Super Guppy on Dryden Flight Research Center's (now Armstrong) back ramp. The Guppy then airlifted the two retired T-38s to El Paso, TX, where they will be dismantled for parts to keep other T-38s flown by NASA's Johnson Space Center flyable.	<a href="#">Transcript Link</a>
				Only the T-38s' wingtips were removed to enable them to fit in the Guppy's 25-foot-wide cargo bay. This 4-minute, 3-second video includes a brief 15-second time-lapse compilation of the loading operations on NASA Dryden's aircraft ramp at the end.	
				For more information on the Super Guppy, visit: <a href="https://www.nasa.gov/centers/dryden/multimedia/imagegallery/Guppy/Guppy_proj_desc.html">https://www.nasa.gov/centers/dryden/multimedia/imagegallery/Guppy/Guppy_proj_desc.html</a>	
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/YFs_iy_33JY">https://youtu.be/YFs_iy_33JY</a>	Discover Internships at NASA Armstrong	NASA Armstrong Flight Research Center offers internship opportunities to high school, undergraduate, and graduate students. This 2-minute, 50-second video shows how Armstrong interns gain valuable hands-on experience supporting NASA efforts such as aeronautical research, unmanned aerial systems development, and aircraft maintenance.	<a href="#">Transcript Link</a>
				To learn more about internship opportunities at Armstrong and across NASA, visit <a href="https://intern.nasa.gov/">https://intern.nasa.gov/</a>	
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RvLOKc10ahw">https://youtu.be/RvLOKc10ahw</a>	Highlights from the 2007 Bohn-Meyer Math and Science Odyssey	This 5-minute, 32-second movie clip has highlights from the 2007 Bohn-Meyer Math and Science Odyssey held on January 26, 2007 at Antelope Valley College in Lancaster, California.	<a href="#">Transcript Link</a>
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rqweHrsy2oI">https://youtu.be/rqweHrsy2oI</a>	Apollo 11 Astronaut 'Buzz' Aldrin Throws Out First Pitch at Lancaster Jethawks Game	This 52-second movie taken on August 25, 2007 shows highlights from an Aerospace Appreciation Night where Apollo 11 Astronaut 'Buzz' Aldrin was honored by the Lancaster Jethawks.	<a href="#">0</a>

2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tOK8_xdkgic">https://youtu.be/tOK8_xdkgic</a>	Lancaster Jethawks Aerospace Appreciation Night Honoring Apollo 11 Astronaut 'Buzz' Aldrin	This 1-minute, 29-second video taken on August 25, 2007 in Lancaster, California shows highlights from an Aerospace Appreciation Night where Apollo 11 Astronaut 'Buzz' Aldrin was honored by the Lancaster Jethawks with a bobblehead doll. L-R: Jethawks mascot KaBoom, Edwin "Buzz" Aldrin, William "Bill" Dana, and Gordon "Gordo" Fullerton.	<a href="#">0</a>
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/dhrMchgalT0">https://youtu.be/dhrMchgalT0</a>	Former Center Director Kevin Petersen's Farewell Flight in an F-A 18	This 1-minute, 31-second video from April 2, 2009 shows former NASA Dryden Flight Research Center director Kevin Petersen taking a farewell flight in a NASA F-A/18 and receiving a customary water dowsing at the end of the flight.	<a href="#">0</a>
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9kdMbhDixQ">https://youtu.be/9kdMbhDixQ</a>	Gordon Fullerton's Career in Review	This 2-minute video released on April 30, 2009 highlights the career of retired NASA astronaut and research pilot Gordon Fullerton.	<a href="#">Transcript Link</a>
2017 07 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/lt8e291oOqY">https://youtu.be/lt8e291oOqY</a>	NASA Administrator Charlie Bolden Tours Dryden	Following rollout of NASA's Fiscal Year 2013 budget proposal in early February 2012, top NASA officials, including administrator Charlie Bolden, visited the Agency's field centers to update employees on how the proposals were in keeping with NASA's overall goals and how they might affect each Center.  This 1-minute, 29-second video from February 23, 2012 highlights NASA Administrator Bolden's visit to Dryden Flight Research Center (now Armstrong). The following day, Bolden also gave a speech to members of the Antelope Valley Board of Trade in Lancaster, California.	<a href="#">Transcript Link</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/urCFXYV8EbE">https://youtu.be/urCFXYV8EbE</a>	Infrared Laser Beaming to Power a Model Aircraft	This 36-second movie taken September 18, 2003 shows a demonstration of powering a model aircraft with an infrared laser beam.  For more information on power beaming, visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-087-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-087-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/soyeGnLxork">https://youtu.be/soyeGnLxork</a>	Initial Demonstration of Power-Beaming a Model Aircraft with Visible Light Energy	This 36-second movie clip taken August 1, 2002 shows powering a model aircraft with a visible light beam which later was demonstrated with an infrared laser energy source.  For more information on power beaming, visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-087-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-087-DFRC.html</a>	<a href="#">0</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fsTtI3MPcak">https://youtu.be/fsTtI3MPcak</a>	NASA Dryden Towed Glider Air- Launch Concept	This 1-minute, 13-second animation created in January of 2013 depicts a novel space access, rocket launching technique called the Towed Glider Air-Launch (TGALS) Concept that was being developed at NASA Dryden Flight Research Center (now Armstrong).  The idea was to build a relatively inexpensive, remotely or optionally piloted glider that would be towed to 40,000 feet by a large transport aircraft. The glider would carry a booster rocket capable of launching payloads into low Earth orbit.  To learn more about the Towed Glider Air-Launch Concept visit: <a href="https://www.nasa.gov/centers/dryden/Features/towed_glider_concept.html">https://www.nasa.gov/centers/dryden/Features/towed_glider_concept.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/uCLCq_ggCL4">https://youtu.be/uCLCq_ggCL4</a>	X-45A UCAV Project Overview and Autonomous Formation Maneuver	This 5-minute, 25-second video from 2002 provides a detailed overview of the X-45A Unmanned Combat Air Vehicle (UCAV) project and features an autonomous formation maneuver over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				<p>The UCAV system demonstration program was a joint Defense Advanced Research Projects Agency (DARPA)/Air Force/Boeing effort to demonstrate the technical feasibility of a UCAV system to conduct various strike missions within the emerging global command and control architecture. The demonstrations within the program provided the information to enable decision-makers to determine whether it was technically and fiscally prudent to continue development of UCAV aircraft to perform missions.</p>	
				<p>The Dryden Flight Research Center's (now Armstrong) role in the UCAV program was providing technical expertise and facilities support for the UCAV X-45A under a 1999 agreement with DARPA and The Boeing Company. The X-45A consisted of two UCAV demonstration aircraft that were used in advance of fielding operational systems around 2008.</p>	
				<p>To learn more about the X-45A visit: <a href="https://www.nasa.gov/centers/dryden/research/X45A/index.html">https://www.nasa.gov/centers/dryden/research/X45A/index.html</a></p>	
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cgmmf_x67IGU">https://youtu.be/cgmmf_x67IGU</a>	X-45A UCAV Taking off From Edwards Air Force Base	This 30-second video from 2002 shows the X-45A Unmanned Combat Air Vehicle (UCAV) taking off from Edwards Air Force Base in California.	<a href="#">Transcript Link</a>
				<p>The UCAV system demonstration program was a joint Defense Advanced Research Project Agency (DARPA)/Air Force/Boeing effort to demonstrate the technical feasibility for a UCAV system to conduct various strike missions within the emerging global command and control architecture. The demonstrations within the program provided the information to enable decision-makers to determine whether it was technically and fiscally prudent to continue development of UCAV aircraft to perform missions.</p>	
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/LAUmF87eQBs">https://youtu.be/LAUmF87eQBs</a>	X-45A UCAV Landing on Rogers Dry Lake at Edwards AFB	This 42-second movie clip shows the X-45A Unmanned Combat Air Vehicle (UCAV) landing on Rogers Dry Lake at Edwards Air Force Base in California.	<a href="#">Transcript</a> <a href="#">Link</a>
				<p>The UCAV system demonstration program was a joint Defense Advanced Research Projects Agency (DARPA)/Air Force/Boeing effort to demonstrate the technical feasibility for a UCAV system to conduct various strike missions within the emerging global command and control architecture. The demonstrations within the program provided the information to enable decision-makers to determine whether it was technically and fiscally prudent to continue development of UCAV aircraft to perform missions.</p>	
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/0XJ853pn9WU">https://youtu.be/0XJ853pn9WU</a>	X-45A UCAV in Flight Over California's Mojave Desert	This 36-second video from 2002 shows the X-45A/Unmanned Combat Air Vehicle (UCAV) performing a test flight over California's Mojave Desert near Edwards, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				<p>The UCAV system demonstration program was a joint Defense Advanced Research Projects Agency (DARPA)/Air Force/Boeing effort to demonstrate the technical feasibility for a UCAV system to conduct various strike missions within the emerging global command and control architecture. The demonstrations within the program provided the information necessary to enable decision-makers to determine whether it was technically and fiscally prudent to continue development of UCAV aircraft to perform missions.</p>	
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/krvFjwz167c">https://youtu.be/krvFjwz167c</a>	X-31 High-Angle-of-Attack Mission	<p>This 29-second video from the early 1990's shows the X-31 Enhanced Fighter Maneuverability (EFM) demonstrator flying a high-angle-of-attack test flight at Edwards Air Force Base in California's Mojave Desert.</p> <p>Two X-31 Enhanced Fighter Maneuverability (EFM) demonstrators were flown at the Rockwell International Palmdale, CA, facility and the NASA Dryden Flight Research Center (now Armstrong), Edwards, CA, to obtain data that may apply to the design of highly-maneuverable next-generation fighters. The program had its first flight on October 11, 1990, in Palmdale; it ended in June 1995.</p> <p>The X-31 program demonstrated the value of thrust vectoring (directing engine exhaust flow) coupled with advanced flight control systems, to provide controlled flight during close-in air combat at very high angles of attack. The result of this increased maneuverability is an airplane with a significant advantage over conventional fighters.</p> <p>"Angle-of-attack" (alpha) is an engineering term to describe the angle of an aircraft body and wings relative to its actual flight path. During maneuvers, pilots often fly at extreme angles of attack -- with the nose pitched up while the aircraft continues in its original direction. This can lead to loss of control and result in the loss of the aircraft, pilot or both.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/97KiqcEvQHI">https://youtu.be/97KiqcEvQHI</a>	X-31 Enhanced Fighter Maneuverability Aircraft in Flight over the Mojave Desert	<p>Three thrust-vectoring paddles made of graphite epoxy mounted on</p> <p>This 30-second video from 1992 shows the X-31 Enhanced Fighter Maneuverability (EFM) demonstrator in flight over California's Mojave Desert.</p> <p>Two X-31 Enhanced Fighter Maneuverability (EFM) demonstrators were flown at the Rockwell International Palmdale, California, facility and the NASA Dryden Flight Research Center (now Armstrong), Edwards, CA, to obtain data that may apply to the design of highly-maneuverable next-generation fighters. The program had its first flight on October 11, 1990, in Palmdale; it ended in June 1995.</p> <p>The X-31 program demonstrated the value of thrust vectoring (directing engine exhaust flow) coupled with advanced flight control systems, to provide controlled flight during close-in air combat at very high angles of attack. The result of this increased maneuverability is an airplane with a significant advantage over conventional fighters.</p> <p>"Angle-of-attack" (alpha) is an engineering term to describe the angle of an aircraft body and wings relative to its actual flight path. During maneuvers, pilots often fly at extreme angles of attack -- with the nose pitched up while he aircraft continues in its original direction. This can lead to loss of control and result in the loss of the aircraft, pilot or both.</p> <p>Three thrust-vectoring paddles made of graphite epoxy mounted on</p>	<a href="#">0</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/w61qCsDg7II">https://youtu.be/w61qCsDg7II</a>	SR-71B Blackbird Pilot Trainer Aircraft	<p>This 29-second video from 1992 shows preflight, takeoff, and flight of the SR-71B Blackbird Pilot Trainer aircraft.</p> <p>Two SR-71A aircraft were loaned from the U.S. Air Force for use for high-speed, high-altitude research at the NASA Dryden Flight Research Center, (now Armstrong) Edwards, CA. One of them was later returned to the Air Force. A third SR-71 on loan from the Air Force was an SR-71B used for training but not for flight research.</p> <p>Developed for the U.S. Air Force as reconnaissance aircraft more than 50 years ago by Lockheed's Skunk Works division, SR-71 aircraft were the world's fastest and highest-flying production aircraft.</p> <p>These aircraft could fly more than 2200 miles per hour (Mach 3+ or more than three times the speed of sound) and at altitudes of over 85,000 feet. This operating environment made the aircraft excellent platforms to carry out research and experiments in disciplines such as aerodynamics, propulsion, structures, thermal protection materials, high-speed and high-temperature instrumentation, atmospheric studies, and sonic-boom characterization.</p> <p>Data from the SR-71 high-speed research program was used to aid designers of future supersonic or hypersonic aircraft and propulsion systems, including a possible high-speed civil transport.</p>	<a href="#">Transcript Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KrhJ3vFD3fE">https://youtu.be/KrhJ3vFD3fE</a>	SR-71 LASRE in Flight over California's Mojave Desert	<p>This 39-second video from 1998 shows the NASA SR-71, with the Linear Aerospike SR-71 Experiment (LASRE) attached, in flight over California's Mojave Desert.</p> <p>Two SR-71A aircraft were loaned from the U.S. Air Force for use for high-speed, high-altitude research at the NASA Dryden Flight Research Center, (now Armstrong) Edwards, CA. One of them was later returned to the Air Force. A third SR-71 on loan from the Air Force was an SR-71B used for training but not for flight research.</p> <p>Developed for the U.S. Air Force as reconnaissance aircraft more than 50 years ago by Lockheed's Skunk Works division, SR-71 aircraft were the world's fastest and highest-flying production aircraft.</p> <p>These aircraft could fly more than 2200 miles per hour (Mach 3+ or more than three times the speed of sound) and at altitudes of over 85,000 feet. This operating environment made the aircraft excellent platforms to carry out research and experiments in disciplines such as aerodynamics, propulsion, structures, thermal protection materials, high-speed and high-temperature instrumentation, atmospheric studies, and sonic-boom characterization.</p> <p>Data from the SR-71 high-speed research program was used to aid designers of future supersonic or hypersonic aircraft and propulsion systems, including a possible high-speed civil transport.</p>	<a href="#">Transcript Link</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cxGbmAtfaX8">https://youtu.be/cxGbmAtfaX8</a>	SR-71 LASRE Refueling in Flight from a KC-135	<p>This 41-second video shows the NASA SR-71, with the Linear Aerospike Rocket Engine (LASRE) attached, being refueled in flight by a US Air Force KC-135 tanker.</p> <p>Two SR-71A aircraft were loaned from the U.S. Air Force for use for high-speed, high-altitude research at the NASA Dryden Flight Research Center, (now Armstrong) Edwards, CA. One of them was later returned to the Air Force. A third SR-71 on loan from the Air Force was an SR-71B used for training but not for flight research.</p> <p>Developed for the U.S. Air Force as reconnaissance aircraft more than 50 years ago by Lockheed's Skunk Works division, SR-71 aircraft were the world's fastest and highest-flying production aircraft.</p> <p>These aircraft could fly more than 2200 miles per hour (Mach 3+ or more than three times the speed of sound) and at altitudes of over 85,000 feet. This operating environment made the aircraft excellent platforms to carry out research and experiments in areas such as aerodynamics, propulsion, structures, thermal protection materials, high-speed and high-temperature instrumentation, atmospheric studies, and sonic-boom characterization.</p> <p>Data from the SR-71 high-speed research program was used to aid designers of future supersonic or hypersonic aircraft and propulsion systems, including a possible high-speed civil transport.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/iKNS4DTj3io">https://youtu.be/iKNS4DTj3io</a>	SR-71 Blackbird Refueling in Flight	<p>This 35-second video taken in 1991 shows the NASA SR-71 Blackbird being refueled during a test flight by a U S Air Force tanker.</p> <p>Two SR-71A aircraft were loaned from the U.S. Air Force for use for high-speed, high-altitude research at the NASA Dryden Flight Research Center, (now Armstrong) Edwards, CA. One of them was later returned to the Air Force. A third SR-71 on loan from the Air Force was an SR-71B used for training but not for flight research.</p> <p>Developed for the U.S. Air Force as reconnaissance aircraft more than 50 years ago by Lockheed's Skunk Words division, SR-71 aircraft were the world's fastest and highest-flying production aircraft.</p> <p>These aircraft could fly more than 2200 miles per hour (Mach 3+ or more than three times the speed of sound) and at altitudes of over 85,000 feet. This operating environment made the aircraft excellent platforms to carry out research and experiments in a variety of areas -- aerodynamics, propulsion, structures, thermal protection materials, high-speed and high-temperature instrumentation, atmospheric studies, and sonic-boom characterization.</p> <p>Data from the SR-71 high-speed research program was used to aid designers of future supersonic or hypersonic aircraft and propulsion systems, including a possible high-speed civil transport.</p> <p>The SR-71 program at Dryden was part of the NASA overall high-</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bJ3kjbv3oVI">https://youtu.be/bJ3kjbv3oVI</a>	SR-71 Takeoff at Edwards Air Force Base	<p>This 43-second video from 1991 shows the NASA SR-71 taking off from Edwards Air Force Base in California's Mojave Desert.</p> <p>Two SR-71A aircraft were loaned from the U.S. Air Force for use for high-speed, high-altitude research at the NASA Dryden Flight Research Center, (now Armstrong) Edwards, CA. One of them was later returned to the Air Force. A third SR-71 on loan from the Air Force was an SR-71B used for training but not for flight research.</p> <p>Developed for the U.S. Air Force as reconnaissance aircraft more than 30 years ago, SR-71 aircraft were the world's fastest and highest-flying production aircraft.</p> <p>These aircraft could fly more than 2200 miles per hour (Mach 3+ or more than three times the speed of sound) and at altitudes of over 85,000 feet. This operating environment made the aircraft excellent platforms to carry out research and experiments in a variety of areas -- aerodynamics, propulsion, structures, thermal protection materials, high-speed and high-temperature instrumentation, atmospheric studies, and sonic-boom characterization.</p> <p>Data from the SR-71 high-speed research program was used to aid designers of future supersonic or hypersonic aircraft and propulsion systems, including a possible high-speed civil transport.</p> <p>The SR-71 program at Dryden was part of the NASA overall high-speed aeronautical research program, and projects involved other</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/0Mzdl_eunNgc">https://youtu.be/0Mzdl_eunNgc</a>	X-24B Launch from B-52 Mothership	<p>This 47-second video from 1974 shows the X-24B launching from the B-52 mothership and performing a successful test flight over California's Mojave Desert.</p> <p>A fleet of lifting bodies flown at the NASA Flight Research Center (now Armstrong), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.</p> <p>In 1962, FRC Director Paul Bikle approved a program to build a lightweight, unpowered lifting body as a prototype to flight test the wingless concept. It would look like a "flying bathtub," and was designated the M2-F1. It featured a plywood shell, built by Gus Briegleb (a sailplane builder from El Mirage, CA) placed over a tubular steel frame crafted at the FRC. Construction was completed in 1963.</p> <p>The success of the Flight Research Center M2-F1 program led to NASA development and construction of two heavyweight lifting bodies based on studies at the NASA Ames and Langley Research Centers -- the M2-F2 and the HL-10, both built by the Northrop Corporation, Hawthorne, CA. The Air Force also became interested in lifting body research and had a third design concept built, the X-24A, built by the Martin Company, Denver, CO. It was later modified into the X-24B and both configurations were flown in the joint</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2KGjmFolyPs">https://youtu.be/2KGjmFolyPs</a>	X-24B Landing on Runway 04 at Edwards AFB	This 34-second video from 1975 shows the X-24B gliding to a safe landing on Runway 04 at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				A fleet of lifting bodies flown at the NASA Flight Research Center, Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.	
				In 1962, FRC Director Paul Bikle approved a program to build a lightweight, unpowered lifting body as a prototype to flight test the wingless concept. It would look like a "flying bathtub," and was designated the M2-F1. It featured a plywood shell, built by Gus Briegleb (a sailplane builder from El Mirage, CA) placed over a tubular steel frame crafted at the FRC. Construction was completed in 1963.	
				The success of the Flight Research Center M2-F1 program led to NASA development and construction of two heavyweight lifting bodies based on studies at the NASA Ames and Langley Research Centers -- the M2-F2 and the HL-10, both built by the Northrop Corporation, Hawthorne, CA. The Air Force also became interested in lifting body research and had a third design concept built, the X-24A, built by the Martin Company, Denver, CO. It was later modified into the X-24B and both configurations were flown in the joint NASA-Air Force lifting body program located at the FRC.	
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/yO3kS2mVIF4">https://youtu.be/yO3kS2mVIF4</a>	X-24B Fin Airflow Test	This 25-second video from 1975 shows the X-24B being dropped from a B-52 aircraft and performing a fin airflow test over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
				A fleet of lifting bodies flown at the NASA Flight Research Center, Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.	
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RMV_T28byRg">https://youtu.be/RMV_T28byRg</a>	X-24A Escorted Landing on Rogers Dry Lake	<p>This 32-second movie shows an X-24A Lifting Body escorted landing on Rogers Dry Lake at Edwards Air Force Base after a successful test flight.</p> <p>The X-24 was one of a group of lifting bodies flown by the NASA Flight Research Center (now Armstrong Flight Research Center), Edwards, CA, in a joint program with the U.S. Air Force at Edwards Air Force Base from 1963 to 1975. The lifting bodies were used to demonstrate the ability of pilots to maneuver and safely land wingless vehicles designed to fly back to Earth from space and be landed like an airplane at a pre-determined site.</p> <p>To learn more about the X-24A and other Lifting Bodies visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/0-XqO42ihjY">https://youtu.be/0-XqO42ihjY</a>	X-24A High- Altitude Ascent During a Test Flight	<p>This 32-second video from the 1970's shows the X-24A Lifting Body during a high-altitude ascent test flight over California's Mojave Desert.</p> <p>The X-24 was one of a group of lifting bodies flown by the NASA Flight Research Center (now Armstrong Flight Research Center), Edwards, CA, in a joint program with the U.S. Air Force at Edwards Air Force Base from 1963 to 1975. The lifting bodies were used to demonstrate the ability of pilots to maneuver and safely land wingless vehicles designed to fly back to Earth from space and be landed like an airplane at a pre-determined site.</p> <p>To learn more about the X-24A and other Lifting Bodies visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vhhqZs7M0z0">https://youtu.be/vhhqZs7M0z0</a>	X-24A Landing on Rogers Dry Lake at Edwards Air Force Base	<p>This 28-second video taken in the 1970's shows the X-24A performing a test flight and landing on Rogers Dry Lake at Edwards Air Force Base in California.</p> <p>The X-24 was one of a group of lifting bodies flown by the NASA Flight Research Center (now Armstrong Flight Research Center), Edwards, CA, in a joint program with the U.S. Air Force at Edwards Air Force Base from 1963 to 1975. The lifting bodies were used to demonstrate the ability of pilots to maneuver and safely land wingless vehicles designed to fly back to Earth from space and be landed like an airplane at a pre-determined site.</p> <p>To learn more about the X-24A and other Lifting Bodies visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 12 NASA Armstrong Flight Research Center <https://youtu.be/Tk48uc3n1dk> X-24A Descent and Landing at Edwards Air Force Base This 53-second video from the 1970's was taken from a camera mounted on the nose of the X-24A Lifting Body. The video shows a descent and landing at Edwards Air Force Base in California's Mojave Desert. [Transcript Link](#)

The X-24 was one of a group of lifting bodies flown by the NASA Flight Research Center (now Armstrong Flight Research Center), Edwards, CA, in a joint program with the U.S. Air Force at Edwards Air Force Base from 1963 to 1975. The lifting bodies were used to demonstrate the ability of pilots to maneuver and safely land wingless vehicles designed to fly back to Earth from space and be landed like an airplane at a pre-determined site.

To learn more about the X-24A Lifting Body visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-011-DFRC.html>

2017 07 12 NASA Armstrong Flight Research Center <https://youtu.be/L6Jh8LKJ2A> HL-10 Approach and Landing at Edwards Air Force Base This 44-second video from the 1970's shows the HL-10 drop from the B-52 mothership and performing an approach and landing test flight at Edwards Air Force Base in California's Mojave Desert. [Transcript Link](#)

A fleet of lifting bodies flown at the NASA Flight Research Center, Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.

These unique research vehicles, with their unconventional aerodynamic shapes, were the M2-F1, M2-F2, M2-F3, HL-10, X-24A, and the X-24B. The information the lifting body program generated contributed to the database that led to development of the Space Shuttle program as well as the X-33 and X-38 technology demonstrators.

Aerodynamic lift -- essential to flight in the atmosphere -- was obtained from the shape of the vehicles rather than from wings on a normal aircraft. The addition of fins and control surfaces allowed the pilots to stabilize and control the vehicles and regulate their flight paths. All but the M2-F1 were powered by the same type of XLR-11 rocket engine used in the famed Bell X-1 -- first aircraft to fly faster than the speed of sound. The M2-F1, a lightweight prototype, was unpowered.

The success of the Dryden M2-F1 program led to the NASA

2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/s-SrpXT5hl">https://youtu.be/s - SrpXT5hl</a>	HL-10 Cockpit View of Approach and Landing at Edwards AFB	This 30-second video from the 1970's shows a cockpit view from the HL-10 of an approach and landing at Edwards Air Force Base in California's Mojave Desert	<a href="#">Transcript</a> <a href="#">Link</a>	
				A fleet of lifting bodies flown at the NASA Flight Research Center, Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.		
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rxAEKrdnTJU">https://youtu.be/rxAEKrdnTJU</a>	HL-10 Landing with F5D-1 Skylancer Escort	This 31-second clip from the mid to late 1960's shows the HL-10 landing with an F5D-1 Skylancer escort at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>	
				A fleet of lifting bodies flown at the NASA Flight Research Center (now Armstrong), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were basically designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site.		
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2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/wTFIAptBBw">https://youtu.be/wTFIAptBBw</a>	M2-F3 Lifting Body Glide Flight over Edwards AFB	This 36-second video from the 1970's shows the M2-F3 dropping from the B-52, performing a gliding test flight over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
<p>The M2-F2/F3 was the first of the heavy-weight, entry-configuration lifting bodies. Over 27 missions, the M2-F3 reached a top speed of 1,064 mph (Mach 1.6). Highest altitude reached by vehicle was 71,500 feet on Dec. 21, 1972, the date of its last flight, with NASA pilot John Manke at the controls. NASA donated the M2-F3 vehicle to the Smithsonian Institution in December 1973.</p>					
<p>A fleet of lifting bodies flown at the NASA Flight Research Center (FRC -- now Armstrong Flight Research Center), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver and safely land a wingless vehicle designed to fly back to Earth from space and be landed like an aircraft at a pre-determined site.</p>					
<p>Aerodynamic lift -- essential to flight in the atmosphere -- was obtained from the shape of their bodies. The addition of fins and control surfaces allowed the pilots to stabilize and control the vehicles and regulate their flight paths.</p>					
<p>The information the lifting body program generated contributed to the data base that led to development of today's Space Shuttle program.</p>					
<p>The success of the FRC's M2-F1 program led to NASA's development</p>					
2017 07 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cLAddlfddRY">https://youtu.be/cLAddlfddRY</a>	M2-F3 Lifting Body Test Flight Over the Mojave Desert	This 39-second video from the early 1970's shows the M2-F3 Lifting Body performing a test flight over California's Mojave Desert near Edwards Air Force Base.	<a href="#">Transcript Link</a>
<p>The M2-F2/F3 was the first of the heavy-weight, entry-configuration lifting bodies. Over 27 missions, the M2-F3 reached a top speed of 1,064 mph (Mach 1.6). Highest altitude reached by vehicle was 71,500 feet on Dec. 21, 1972, the date of its last flight, with NASA pilot John Manke at the controls. NASA donated The M2-F3 vehicle to the Smithsonian Institution in December 1973.</p>					
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2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Deq86jrg5Wk">https://youtu.be/Deq86jrg5Wk</a>	Milt Thompson Prepares for M2- F2 Glide Flight	<p>This 34-second video from 1967 shows test pilot Milt Thompson climbing into the cockpit and preparing for an M2-F2 glide flight.</p> <p>A fleet of lifting bodies flown at the NASA Flight Research Center (FRC), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site. They served as precursors of today's Space Shuttle, the X-33, and the X-38, providing technical and operational engineering data that shaped all three space vehicles. (In 1976 NASA renamed the FRC as the NASA Dryden Flight Research Center (DFRC) in honor of Hugh L. Dryden. The Center's name was changed once again in 2014 to honor Neil A. Armstrong).</p> <p>In 1962, FRC Director Paul Bikle approved a program to build a lightweight, unpowered lifting body as a prototype to flight test the wingless concept. It would look like a "flying bathtub," and was designated the M2-F1. Built by Gus Briegleb, a sailplane builder from El Mirage, CA, it featured a plywood shell, placed over a tubular steel frame crafted at the FRC. Construction was completed in 1963.</p> <p>The success of Dryden's M2-F1 program led to NASA's development and construction of two heavyweight lifting bodies based on studies at NASA Ames Research Center and NASA and Langley Research Center -- the M2-F2 and the HL-10, both built by the Northrop</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aEgfHPyUG0U">https://youtu.be/aEgfHPyUG0U</a>	M2-F2 Test Flight with F5D-1 and F- 104N Escorts	<p>This 43-second video from 1967 shows the M2-F2 test flight over California's Mojave Desert. The wingless vehicle is being escorted to the runway by an F5D-1 and an F-104N.</p> <p>A fleet of lifting bodies flown at the NASA Flight Research Center (FRC), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site. They served as precursors of today's Space Shuttle, the X-33, and the X-38, providing technical and operational engineering data that shaped all three space vehicles. (In 1976 NASA renamed the FRC as the NASA Dryden Flight Research Center (DFRC) in honor of Hugh L. Dryden. The Center's name changed once again in 2014 to honor Neil A. Armstrong).</p> <p>In 1962, FRC Director Paul Bikle approved a program to build a lightweight, unpowered lifting body as a prototype to flight test the wingless concept. It would look like a "flying bathtub," and was designated the M2-F1. Built by Gus Briegleb, a sailplane builder from El Mirage, CA, it featured a plywood shell, placed over a tubular steel frame crafted at the FRC. Construction was completed in 1963.</p> <p>The success of Dryden's M2-F1 program led to NASA's development and construction of two heavyweight lifting bodies based on studies at NASA Ames Research Center and NASA and Langley Research</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TdvYuFqE3JI">https://youtu.be/TdvYuFqE3JI</a>	M2-F2 Experiencing Lateral Oscillations in Flight	This 28-second video from 1967 shows an M2-F2 test flight with the lifting body experiencing left to right lateral oscillations. The video also shows the M2-F2 is being escorted by an F5D-1 and F-104N.	<a href="#">Transcript</a> <a href="#">Link</a>
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2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gxeODo5Jleo">https://youtu.be/gxeODo5Jleo</a>	M2-F2 Drop From NB-52A Mothership	This 32-second video from 1966 shows the M2-F2 drop from the NB-52A Mothership and the subsequent test flight and landing at Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				A fleet of lifting bodies flown at the NASA Flight Research Center (FRC), Edwards, CA, from 1963 to 1975 demonstrated the ability of pilots to maneuver in the atmosphere and safely land a wingless vehicle. These lifting bodies were designed so they could fly back to Earth from space and be landed like an aircraft at a pre-determined site. They served as precursors of today's Space Shuttle, the X-33, and the X-38, providing technical and operational engineering data that shaped all three space vehicles. (In 1976 NASA renamed the FRC as the NASA Dryden Flight Research Center (DFRC) in honor of Hugh L. Dryden. The Center's name changed once again in 2014 to honor Neil A. Armstrong)	
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2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/C1h0oO9ojrM">https://youtu.be/C1h0oO9ojrM</a>	Mothership Drop Test of an M-2 Lifting Body Model	<p>This 46-second video from the late 1960's shows a mothership drop test of an M-2 lifting body model.</p> <p>The M2-F1 lifting body, dubbed the "flying bathtub" by the media, was the precursor of a remarkable series of wingless flying vehicles that contributed data used in the Space Shuttles.</p>	<a href="#">Transcript Link</a>
				<p>Based on the ideas and basic design of Alfred J. Eggers and others at the Ames Aeronautical Laboratory (now the Ames Research Center), Mountain View, CA, in the mid-1950's, the M2-F1 was built in 1962-63 over a four-month period for a cost of only about \$30,000, plus an additional \$8,000 - \$10,000 for an ejection seat. Engineers and technicians at the NASA Flight Research Center (now NASA Armstrong) kept costs low by designing and fabricating it partly in-house, with the plywood shell constructed by a local sailplane builder. Someone at the time estimated that it would have cost a major aircraft company \$150,000 to build the same vehicle.</p>	
				<p>Unlike the later lifting bodies, the M2-F1 was unpowered and was initially towed by a souped-up Pontiac convertible until it was airborne. Later a C-47 took over the towing duties. Flown by such famous research pilots as Milt Thompson, Bruce Peterson, Chuck Yeager, and Bill Dana, the lightweight flying bathtub demonstrated that a wingless vehicle shaped for reentry into the Earth's atmosphere from space could be flown and landed safely.</p>	
				<p>Flown from 1963 to 1966, the lightweight M2-F1 paved the way for</p>	
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/w6ZyOdeLUg">https://youtu.be/w6ZyOdeLUg</a>	Dale Reed's Home Movie of an Early M2-F1 Model	<p>This 15-second video from 1962 of the flight of an early M2-F1 model was taken by NASA engineer Dale Reed with his home movie camera.</p> <p>The M2-F1 lifting body, dubbed the "flying bathtub" by the media, was the precursor of a remarkable series of wingless flying vehicles that contributed data used in the Space Shuttles.</p>	<a href="#">Transcript Link</a>
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2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/E6dkNDI1cUs">https://youtu.be/E6dkNDI1cUs</a>	M2-F1 Car Tow Test With 1963 Pontiac Catalina	This 33-second video from 1963 shows the M2-F1 being towed by a Pontiac Catalina convertible across Rogers Dry Lakebed at Edwards, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				The M2-F1 lifting body, dubbed the "flying bathtub" by the media, was the precursor of a remarkable series of wingless flying vehicles that contributed data used in the Space Shuttles.	
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2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/c3f-oqz5YdY">https://youtu.be/c3f-oqz5YdY</a>	X-3 Pre-flight Calibration, Test Flight, and Landing	This 41-second video from 1954 shows the Douglas X-3 Stiletto during pre-flight calibration and performing a test flight over Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
				The slender, jet-powered X-3, built by Douglas Aircraft Company, Long Beach, CA, tested such new materials as titanium and collected data on stability and control, pressure distribution, and flight loads. Because it was under-powered with an interim J34 engine, the X-3 failed to achieve the high speeds for which it was designed, but it pioneered in the use of titanium and contributed to the development of aircraft tire technology.	
				Following completion of contractor testing in 1953 and a brief Air Force evaluation in 1953-54, the lone X-3 aircraft (serial number 49-2892) was transferred to the National Advisory Committee for Aeronautics (NACA), with research pilot Joseph A. Walker of the High-Speed Flight Station (now the Armstrong Flight Research Center) flying all 20 of its NACA research flights from 1954 to 1956.	
				During Walker's tenth flight on October 27, 1954, he performed two abrupt, rudder-fixed aileron rolls at speeds of Mach 0.92 and 1.05 (0.92 and 1.05 times the speed of sound) that led to inertial roll coupling, causing him to diverge from the expected flight path. These two maneuvers, from which he fortunately was able to recover, yielded a wealth of valuable data on the (as yet not fully understood) phenomenon of inertial coupling. Together with data from other aircraft, such as the X-2 and the F-100, this helped the	

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Armstrong  
Flight  
Research  
Center

<https://youtu.be/-dcrQDg-TIA> X-3 Stiletto

This 31-second video from the mid-1950's shows the Douglas X-3 Stiletto on one of its long takeoff runs across the lakebed at Edwards Air Force Base.

[Transcript](#)  
[Link](#)

The slender, jet-powered X-3, built by Douglas Aircraft Company, Long Beach, CA, tested such new materials as titanium and collected data on stability and control, pressure distribution, and flight loads. Because it was under-powered with an interim J34 engine, the X-3 failed to achieve the high speeds for which it was designed, but it pioneered in the use of titanium and contributed to the development of aircraft tire technology.

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Research  
Center

<https://youtu.be/6mye8thvMmU> X-2 Ground Tracking and Chase Plane Images

This 43-second video taken in the mid-1950's shows ground tracking and chase plane images of an X-2 test flight over California's Mojave Desert.

[Transcript](#)  
[Link](#)

The X-2 Starbaster was a swept-wing aircraft designed to fly three times as fast as the speed of sound. It was flown to investigate the problems of aerodynamic heating and stability and control effectiveness at high speeds and altitudes.

The X-2 was a single-place airplane with wings swept back to 40 degrees. It was 37 ft., 10 in. long, 11 ft. high and had a wingspan of 32.3 ft. It was constructed primarily of steel (K-monel) and incorporated a skid-type main landing gear to make more room for fuel. It had an ejectable nose capsule.

The X-2 was powered by an XLR25-CW-3 two-chambered rocket engine. The Curtiss-Wright-manufactured engine was throttleable and had a thrust of from 2,500 to 15,000 lb. Two X-2s were made for the National Advisory Committee for Aeronautics (NACA) and the Air Force by Bell Aircraft Co. They were air launched from a B-50 carrier aircraft.

After one X-2 (no. 2 aircraft) was destroyed in an explosion on a captive flight before ever making any powered flights, the other X-2 (no. 1 aircraft) went on to perform as predicted including making a flight on Sept. 7, 1956, with Air Force Captain Iven Kincheloe at the controls to an altitude of 126,200 ft. Twenty days later the X-2

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d4Svpc85tYw">https://youtu.be/d4Svpc85tYw</a>	X-2 High-altitude Launch from B-50	<p>This 29-second video from the mid-1950's shows an X-2 high-altitude launch from B-50 over California's Mojave Desert.</p> <p>The X-2 Starbaster was a swept-wing aircraft designed to fly three times as fast as the speed of sound. It was flown to investigate the problems of aerodynamic heating and stability and control effectiveness at high speeds and altitudes.</p> <p>The X-2 was a single-place airplane with wings swept back to 40 degrees. It was 37 ft., 10 in. long, 11 ft. high and had a wingspan of 32.3 ft. It was constructed primarily of steel (K-monel) and incorporated a skid-type main landing gear to make more room for fuel. It had an ejectable nose capsule.</p> <p>The X-2 was powered by an XLR25-CW-3 two-chambered rocket engine. The Curtiss-Wright-manufactured engine was throttleable and had a thrust of from 2,500 to 15,000 lb. Two X-2s were made for the National Advisory Committee for Aeronautics (NACA) and the Air Force by Bell Aircraft Co. They were air-launched from a B-50 carrier aircraft.</p> <p>After one X-2 (no. 2 aircraft) was destroyed in an explosion on a captive flight before ever making any powered flights, the other X-2 (no. 1 aircraft) went on to perform as predicted including making a flight on Sept.7, 1956, with Air Force Captain Iven Kincheloe at the controls to an altitude of 126,200 ft. Twenty days later the X-2 program ended when Air Force Captain Milburn Apt piloted the X-2</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zJIWVs4v8">https://youtu.be/zJIWVs4v8</a>	NASA's Original Shuttle Carrier Aircraft Departs Dryden	<p>NASA's Space Shuttle Carrier Aircraft (SCA) No. 905 departed NASA's Dryden (now Armstrong) Flight Research Center on Oct. 24, 2012 for the final time, ending a 38-year association with the NASA field center at Edwards. The modified Boeing 747 jetliner flew from Dryden to Ellington Airport in southeast Houston, where the big Boeing jet was retired.</p> <p>The Independence, a full-scale, high-fidelity replica of the Space Shuttle was placed atop the SCA 905 and the combined exhibit, called "Independence Plaza" was opened at Space Center Houston to the public January 23, 2016.</p> <p>Duration: 1:24 minutes</p> <p>To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/eSKmTywMj_A">https://youtu.be/eSKmTywMj_A</a>	Shuttle Endeavour Flyover of Los Angeles Landmarks	Space Shuttle Endeavour atop NASA's Shuttle Carrier Aircraft flew over many Los Angeles area landmarks on its final ferry flight Sept. 21, 2012, including the Coliseum, the Hollywood Sign, Griffith Observatory, Disneyland, Dodger Stadium, Universal Studios, downtown Los Angeles, the Jet Propulsion Laboratory, the Malibu coastline, and the California Science Center, where Endeavour is now displayed.	<a href="#">Transcript Link</a>	
				Duration: 15:10 minutes		
				To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>		
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BhS4Cw1KvCM">https://youtu.be/BhS4Cw1KvCM</a>	NASA SCA 905 Heads to KSC for Discovery's Final Ferry Flight	NASA's Space Shuttle Carrier Aircraft No. 905 departed NASA's Dryden (now Armstrong) Flight Research Center at Edwards Air Force Base in Southern California April 10, 2012 for NASA's Kennedy Space Center in Florida. The SCA was being prepped to ferry the retired Space Shuttle Discovery to its final destination - the National Air and Space Museum's Stephen F. Udvar-Hazy Center adjacent to Dulles Airport near Washington D.C.	<a href="#">Transcript Link</a>	
				Discovery was mounted piggyback atop the highly modified Boeing 747, and made a low-altitude flyover over several iconic locations in the nation's capital before landing at nearby Dulles International Airport in suburban Chantilly, VA.		
				Duration: 1-minute, 10-seconds		
				To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>		
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GL8sfEYca18">https://youtu.be/GL8sfEYca18</a>	NASA's Shuttle Carrier Aircraft 911's Final Flight	This 1-minute, 43-second video shows NASA 911, one of NASA's two modified Boeing 747 Space Shuttle Carrier (SCA) aircraft, flew its final flight Feb. 8, 2012, a short hop from NASA's Dryden (now Armstrong) Flight Research Center at Edwards Air Force Base to the Dryden Aircraft Operations Facility (now Hangar 703) in Palmdale, CA. Obtained from Japan Air Lines in 1989, it was modified and carried Space Shuttles 66 times on ferry flights over the next 21 years.	<a href="#">Transcript Link</a>	
				To learn more about NASA 911's final flight visit: <a href="https://www.nasa.gov/centers/dryden/Features/sca_911_final_flight.html">https://www.nasa.gov/centers/dryden/Features/sca_911_final_flight.html</a>		
				To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>		

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UBlcxFckG8I">https://youtu.be/UBlcxFckG8I</a>	NASA's Two Modified 747 Shuttle Carrier Aircraft Flying in Formation	This 1-minute, 47-second video shows NASA's two modified Boeing 747 Shuttle Carrier Aircraft (SCA) briefly flying in formation for the first time ever over the Edwards Air Force Base test range on Aug. 2, 2011. NASA 911 was on a pilot proficiency flight while NASA 905 was on a functional check flight following maintenance operations. NASA photographer Carla Thomas captured video imagery of the formation flight from a NASA Dryden F/A-18.  The SCA were based at NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA.  To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>	<a href="#">Q</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/i6ATLbWmTXA">https://youtu.be/i6ATLbWmTXA</a>	747 SCA Approaching Endeavour in Mate-Demate Device	This 37-second video taken in April of 1994 shows the 747 Shuttle Carrier Aircraft (SCA) approaching Space Shuttle Endeavour suspended in the Mate-Demate Device (MDD) at NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA.  To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/K_x6hZBxEYA">https://youtu.be/K_x6hZBxEYA</a>	747 Shuttle Carrier Aircraft (SCA) mated to Space Shuttle Endeavour	This 44-second video taken in April of 1994 shows NASA's 747 Shuttle Carrier Aircraft (SCA) mated to Space Shuttle Endeavour in the Mate-Demate Device (MDD) at Dryden Flight Research Center (now Armstrong).  To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>	<a href="#">Q</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZU4hX4CVMmc">https://youtu.be/ZU4hX4CVMmc</a>	747 Shuttle Carrier Aircraft (SCA) Ferry Flights	This 31-second video taken in 1992 shows the takeoff and landing of the 747 Shuttle Carrier Aircraft (SCA) with the Space Shuttle Discovery aboard at Edwards Air Force Base in California's Mojave Desert.  To learn more about NASA's 747 Shuttle Carrier Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-013-DFRC.html</a>	<a href="#">Transcript Link</a>

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/CProAuVAAQ">https://youtu.be/CProAuVAAQ</a>	Air Force's First C-17 Flies into Retirement	<p>This 1-minute video taken April 23, 2012 shows the first C-17 flown by the U S Air Force departing from Edwards Air Force Base on its retirement flight.</p> <p>The U.S. Air Force retired its first C-17 transport after 21 years as a flight test aircraft and use in joint NASA-USAF propulsion research. NASA Dryden (now Armstrong) Flight Research Center's pilot Frank Batteas, who was an Air Force test pilot on the C-17 for four years before coming to NASA, was on the flight crew for the C-17's ferry flight from Edwards Air Force Base to the National Museum of the Air Force in Dayton, OH.</p>	<a href="#">Transcript Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TSAbKZhj2-l">https://youtu.be/TSAbKZhj2-l</a>	Cal Poly Students Participating in the C-17 Noise Mitigation Flight Test	<p>This 1-minute, 25-second video taken September 10, 2005 shows Cal Poly Students participating in a noise mitigation flight test.</p> <p>The tests were performed using an Air Force C-17.</p>	<a href="#">0</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3-epNVDsSXc">https://youtu.be/3-epNVDsSXc</a>	C-17 Noise Mitigation Flight Test	<p>This 39-second video taken September 10, 2005 shows an Air Force C-17 performing a noise mitigation flight test in partnership with NASA's Dryden (now Armstrong) Flight Research Center.</p> <p>The tests were performed over California's Mojave Desert.</p>	<a href="#">Transcript Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gBmtzksXN5Q">https://youtu.be/gBmtzksXN5Q</a>	C-17 In-flight Maneuvers over California's Mojave Desert	<p>This 32-second video taken in 2003 shows a U.S. Air Force C-17 performing in-flight maneuvers in partnership with NASA Dryden (now Armstrong) Flight Research Center. The maneuvers were performed over California's Mojave Desert.</p> <p>NASA Dryden participated with the U.S. Air Force (USAF), other NASA Centers, The Boeing Company, and Pratt&amp;Whitney in the Propulsion Health Management (PHM) portion of the Integrated Vehicle Health Management (IVHM) program. The program used a USAF C-17 transport in an effort to enhance aircraft safety by enabling early electronic detection of potential problems with aircraft engines and associated systems.</p>	<a href="#">Transcript Link</a>

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KSCT21WpHTc">https://youtu.be/KSCT21WpHTc</a>	C-17 Taking off From Palmdale, California	<p>This 27-second video taken in 2003 shows NASA Dryden (now Armstrong) Flight Research Center's C-17 taking off from Palmdale, CA.</p> <p>NASA Dryden participated with the U.S. Air Force (USAF), other NASA Centers, The Boeing Company, and Pratt &amp; Whitney in the Propulsion Health Management (PHM) portion of the Integrated Vehicle Health Management (IVHM) program. The program used a USAF C-17 transport to enhance aircraft safety by enabling early electronic detection of potential problems with aircraft engines and associated systems.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RadGavdgKAK">https://youtu.be/RadGavdgKAK</a>	C-5A Wing Vortices Tests at NASA Langley Research Center	<p>This 29-second video taken in the 1970's shows a C-5A aircraft undergoing a wing vortices test at NASA's Langley Research Center, Hampton, VA.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ThUcz75VuM">https://youtu.be/ThUcz75VuM</a>	Boeing 747 Wing- Tip Vortex Test	<p>This 36-second video taken November 8, 1979 shows a Boeing 747 undergoing a wing-tip vortex test over Runway 18 at Edwards Air Force Base in California's Mojave Desert.</p> <p>As part of the overall NASA study of trailing vortices -- the invisible flow of spiraling air that trails from the wings of large aircraft and can "upset" smaller aircraft flying behind -- the NASA Flight Research Center (FRC; now Armstrong) borrowed a Boeing 747 jetliner for testing. The B-747 had been purchased by NASA for the Space Shuttle program and assigned to the Johnson Space Center in Houston, TX. Six smoke generators were installed under the wings of the B-747 to provide a visual image of the trailing vortices.</p> <p>The objective was to test different configurations and mechanical devices on the B-747 that could be used to break up or lessen the strength of the vortices. This could lead to shorter spacing between landings and take-offs, thereby helping to alleviate air traffic congestion. Over 30 flights the B-747 aircraft were flown using a combination of wing spoilers in an attempt to reduce wake vortices.</p> <p>To evaluate the effectiveness of the different configurations, chase aircraft were introduced into the vortex sheets to probe their strengths and patterns at different times. Two of the chase airplanes used were the FRC's Cessna T-37 and the NASA Ames Research Center's Learjet. These aircraft were representative of the business jets and smaller aircraft which might encounter large passenger carrying aircraft on approach or landings around major</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1EWR9iGVjow">https://youtu.be/1EWR9iGVjow</a>	SNC Dream Chaser Center Stage at Dryden Media Event	<p>During a visit to NASA's Dryden (now Armstrong) Flight Research Center on May 22, 2013, NASA Administrator Charlie Bolden spoke at a media event showcasing Sierra Nevada Corporation's (SNC) Dream Chaser flight test vehicle that had recently arrived at the Center.</p> <p>Bolden, a former Marine Corps pilot and Space Shuttle astronaut, also flew a simulation of the Dream Chaser's approach and landing profile at Dryden.</p> <p>Duration 2:07 minutes</p> <p>For more information on NASA's Commercial Crew Program visit: <a href="https://www.nasa.gov/exploration/commercial/crew/index.html">https://www.nasa.gov/exploration/commercial/crew/index.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Q8H-QidHM9w">https://youtu.be/Q8H-QidHM9w</a>	Transformed X-48C Takes to the Air on First Flight	<p>This 1-minute, 48-second video taken on April 6, 2010 shows the first test flight of the X-48C Blended-Wing Body.</p> <p>The sub-scale X-48C blended wing body technology demonstrator began a new flight test phase in a partnership between NASA's Dryden (now Armstrong) Flight Research Center and The Boeing Company's Phantom Works research and technology division. The remotely operated aircraft lifted off Rogers Dry Lake at Edwards Air Force Base, CA, on its first test flight Aug. 7, 2012. The craft was modified to a lower-noise configuration, with two higher-thrust turbojets in place of the original three, an extended rear deck, and its vertical tails moved from their prior wingtip location to just outboard of the engine exhaust ducts.</p> <p>To learn more about the X-48C visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7BVk22yzbQY">https://youtu.be/7BVk22yzbQY</a>	X-48B Project Manager Tim Risch Comments on the First Phase Flight Tests	<p>This 3-minute, 9-second video taken on April 6, 2010 features X-48B Project Manager Tim Risch's comments on the first phase test flight for the aircraft. The tests were performed at NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA.</p> <p>Boeing Phantom Works partnered with NASA and the Air Force Research Laboratory to study the structural, aerodynamic, and operational advantages of the Blended-Wing Body advanced aircraft concept, a cross between a conventional plane and a flying wing design. The Air Force has designated the prototype the X-48B based on its interest in the design's potential as a multi-role, long-range, high-capacity military transport aircraft.</p> <p>To learn more about the X-48B visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html</a></p>	<a href="#">0</a>

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/R5hneFaj2L4">https://youtu.be/R5hneFaj2L4</a>	X-48B Blended- Wing Body Phase One Flight Tests	<p>This 1-minute, 14-second video taken on April 6, 2010 shows the Phase One Flight Test of Boeing's X-48B at NASA's Dryden (now Armstrong) Flight Research Center in California's Mojave Desert.</p> <p>Boeing Phantom Works partnered with NASA and the Air Force Research Laboratory to study the structural, aerodynamic, and operational advantages of the Blended-Wing Body advanced aircraft concept, a cross between a conventional plane and a flying wing design. The Air Force has designated the prototype the X-48B based on its interest in the design's potential as a multi-role, long-range, high-capacity military transport aircraft.</p> <p>To learn more about the X-48B visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-090-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4KDK5LvQQA">https://youtu.be/4KDK5LvQQA</a>	XV-15 Tilt-Rotor Takeoff and Maneuvering Test	<p>This 37-second video from the 1980s shows an XV-15 Tiltrotor aircraft taking off and performing maneuvering tests at Edwards Air Force Base in California's Mojave Desert.</p> <p>The XV-15 Tilt-Rotor Technology Demonstrator aircraft was designed by Bell Aircraft, Niagara Falls, NY, in the mid-1970's under a contract with NASA and the U.S. Army. It was capable of taking off and landing vertically like a helicopter and of flying horizontally when its "prop rotors" were rotated forward and downward. NASA Ames Research Center, Mountain View, CA, and the Army Air Mobility Laboratory cooperated in a program to obtain two of the aircraft for flight research. The first aircraft arrived at Ames on March 23, 1978.</p> <p>After wind-tunnel testing in the Ames 40-by-80-foot wind tunnel, the aircraft began its contractor flight tests at Ames on April 23, 1979. Bell, Army, and U.S. Marine pilots flew it on 140 separate missions over the next year before turning the aircraft over to Ames. That Center, in turn, chose to perform the initial flight research at the Dryden (now Armstrong) Flight Research Center, Edwards, CA, where aircraft Number 2 began flight research with Dryden pilots on October 3, 1980, followed by aircraft Number 1 (previously the wind-tunnel model) the following year.</p> <p>Service pilots continued to fly the aircraft, including missions at Fort Huachuca, AZ, and aboard the Navy USS Tripoli. Ames pilots also flew the XV-15 extensively during its lengthy period of flight</p>	<a href="#">Transcript Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-AFsPyN1GN">https://youtu.be/-AFsPyN1GN</a>	XB-70A Cockpit View of Takeoff	<p>This 40-second video taken in 1965 shows the cockpit view and takeoff of an XB-70A Valkyrie from Edwards Air Force Base in California's Mojave Desert.</p> <p>More information on the XB-70 is available here:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-084-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-084-DFRC.html</a></p>	<a href="#">Transcript Link</a>

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/LdSwKqY-WA4">https://youtu.be/LdSwKqY-WA4</a>	XB-70 Valkyrie Landing on the Runway at Edwards AFB	<p>This 46-second video taken in 1965 shows an XB-70A landing at Edwards Air Force Base in California.</p> <p>The XB-70 was the world's largest experimental aircraft. Capable of flight at speeds of three times the speed of sound (2,000 miles per hour) at altitudes of 70,000 feet, the XB-70 was used to collect in-flight information for use in the design of future supersonic aircraft, military and civilian.</p> <p>To learn more about the XB-70A Valkyrie visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-084-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-084-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vJ-XDNI8u_4">https://youtu.be/vJ-XDNI8u_4</a>	YF-12A Coldwall Aerodynamic Heating Experiment	<p>This 39-second video from 1975 shows a YF-12A Coldwall Aerodynamic Heating Experiment.</p> <p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p> <p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/5SwyJTJag08">https://youtu.be/5SwyJTJag08</a>	YF-12C Takeoff from Edwards Air Force Base	<p>This 20-second video from the 1970's shows an YF-12C takeoff from Edwards Air Force Base.</p> <p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p> <p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p> <p>More information on the YF-12 aircraft is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/USsKznwIQxl">https://youtu.be/USsKznwIQxl</a>	YF-12A Landing at Edwards Air Force Base	This 26-second from the 1970's shows an YF-12A landing at Edwards Air Force Base.	<a href="#">Transcript Link</a>
<p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p>					
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<p>For more information on the YF-12A Blackbird visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>					
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pwnRQKZh9Ec">https://youtu.be/pwnRQKZh9Ec</a>	YF-12C Approach and Landing at Edwards Air Force Base	This 32-second video from the 1970's shows an YF-12C approach and landing at Edwards Air Force Base.	<a href="#">Transcript Link</a>
<p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p>					
<p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p>					

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ol7Tcz_a6wi0">https://youtu.be/Ol7Tcz_a6wi0</a>	YF-12C Mid-air Refueling	This 27-second video taken in the 1970's shows the YF-12C during mid-air refueling.	<a href="#">Transcript Link</a>
<p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p>					
<p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p>					
<p>For more information on the YF-12C Blackbird visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>					
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/plPOV_uJrOF0">https://youtu.be/plPOV_uJrOF0</a>	YF-12C Taxi and Takeoff from Edwards Air Force Base	This 34-second video from the 1970's shows a YF-12C taxi and takeoff from Edwards Air Force Base in California's Mojave Desert.	<a href="#">Transcript Link</a>
<p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p>					
<p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p>					
<p>For more information on the YF-12C Blackbird visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>					

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/JNjLuoj9doQ">https://youtu.be/JNjLuoj9doQ</a>	YF-12A Coldwall Ground Separation Test	<p>This 37-second video from 1974 shows the YF-12A Coldwall Ground Separation Test.</p> <p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p> <p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p>	<a href="#">Transcript Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZBuDGp5hqtk">https://youtu.be/ZBuDGp5hqtk</a>	YF-12A Coldwall Ground Separation Test	<p>This 34-second video from 1974 shows the YF-12A Coldwall Ground Separation Test.</p> <p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p> <p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an inflight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p> <p>For more information on the YF-12A Blackbird visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>	<a href="#">Transcript Link</a>

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/A5otH-MrEPQ">https://youtu.be/A5otH-MrEPQ</a>	YF-12A Low-Level Test Flight	<p>This 41-second video taken in the early 1970s shows the YF-12A during a low level test flight over California's Mojave Desert.</p> <p>The YF-12 "Blackbird" was an experimental fighter-interceptor version of the Lockheed A-12 aircraft. In Air Force flight tests on May 1, 1965, the YF-12 set a speed record of 2,070.101 miles per hour and an altitude record of 80,258 feet. First publicly displayed at Edwards Air Force Base, CA, in 1964, the YF-12 was never adopted by the military as an operational aircraft. It was, however, a precursor to the SR-71 Blackbird reconnaissance plane.</p> <p>Two YF-12 aircraft were flown in a joint Air Force-NASA research program at the NASA Flight Research Center (now the NASA Armstrong Flight Research Center) between 1969 and 1979, although the second plane, piloted primarily by the Air Force, was lost to an in-flight fire in 1971. The two YF-12 aircraft bore the serial numbers 60-6935 and 60-6936.</p> <p>For more information on the YF-12A Blackbird visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-047-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/sQGjdrZpQyA">https://youtu.be/sQGjdrZpQyA</a>	Theseus Taking off at Edwards Air Force Base, California	<p>This 31-second movie clip taken October 24, 1996 shows the Theseus taking off at Edwards Air Force Base.</p> <p>Theseus was built and operated by Aurora Flight Sciences Corporation, and was designed to support NASA's Mission to Planet Earth Enterprise by providing a high-altitude, high-endurance platform for carrying scientific remote sensing payloads.</p> <p>Dryden hosted the Theseus program, providing hangar space and range safety for flight testing. Aurora Flight Sciences was responsible for the actual flight testing, vehicle flight safety, and operation of the aircraft.</p> <p>The Theseus remotely piloted aircraft flew its maiden flight on May 24, 1996 at NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA. According to John Del Frate, Dryden's Theseus Project Manager, "Not only is the first flight significant, but the challenge associated with the entire operation exposes NASA and Aurora to important issues which need to be worked and developed as this new class of air vehicles transitions from experimental to commonplace."</p> <p>Theseus was built for NASA under an innovative, \$4.9 million fixed-price contract by Aurora Flight Sciences Corporation, Manassas, VA, and its partners, West Virginia University, Morgantown, WV, and Fairmont State College, Fairmont, WV.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/c2xYT7-RFM">https://youtu.be/c2xYT7-RFM</a>	Four Decades of UAV Research at NASA Dryden	NASA's Dryden (now Armstrong) Flight Research Center has a heritage of developmental and operational experience with unmanned aircraft systems. Spanning from 1969 to the present, this 4-minute, 48-second fast-paced visual survey produced in 2013 captures nearly a half-century of innovation in environmental and aeronautical research, showing the scope, scale, and variety of unmanned and remotely piloted vehicle projects flown at the Center.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about NASA's Unmanned Aerial Vehicles visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/index.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/index.html</a>	
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BdW8_jxhH94">https://youtu.be/BdW8_jxhH94</a>	Proteus UAV Collision- avoidance Test	This 47-second video taken in March of 2002 shows the Proteus aircraft during flight demonstrations of "detect, see, and avoid" equipment that have potential collision-avoidance applications to remotely or autonomously operated unmanned aircraft.	<a href="#">Transcript</a> <a href="#">Link</a>
				Proteus was designed by Burt Rutan, president of Scaled Composites, and built at the firm's development facility in Mojave, CA. Normally flown by two pilots in a pressurized cabin, the Proteus also has potential to perform its missions semi-autonomously.	
				NASA's Dryden Flight Research Center, under the Environmental Research Aircraft and Sensor Technology (ERAST) project, assisted Scaled Composites in development of a sophisticated station-keeping autopilot system; Dryden also supported Proteus envelope-expansion flights by providing full pressure suits for the pilots.	
				For more information on Proteus visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-069-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-069-DFRC.html</a>	
				For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a>	

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d41lFyKAE">https://youtu.be/d41lFyKAE</a>	Proteus UAV Collision- avoidance Test	<p>This 53-second video taken April 1, 2003 shows the Proteus high-altitude aircraft during flight demonstrations of "detect, see, and avoid" equipment that have potential collision-avoidance applications to remotely or autonomously operated unmanned aircraft.</p> <p>It was designed by Burt Rutan, president of Scaled Composites, and built at the firm's development facility in Mojave, CA. Normally flown by two pilots in a pressurized cabin, the Proteus also has potential to perform its missions semi-autonomously.</p> <p>NASA Dryden supported Proteus envelope-expansion flights by providing full pressure suits for the pilots and assisted Scaled Composites in development of a sophisticated station-keeping autopilot system through the Environmental Research Aircraft and Sensor Technology (ERAST) project.</p> <p>For more information on Proteus visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-069-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-069-DFRC.html</a></p> <p>For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9lodrz08pOY">https://youtu.be/9lodrz08pOY</a>	NASA's Pathfinder-Plus Solar-Powered Wing in Flight Over Kaua'i	<p>This 66-second video taken in 2002 shows NASA's Pathfinder-Plus Solar-Powered Wing in flight over Kaua'i, HI. The video also contains footage of the flight being monitored by the flight crew in the control room.</p> <p>The Pathfinder-Plus solar-powered aircraft was designed and fabricated by AeroVironment, Inc., and transferred to NASA's Dryden (now Armstrong) Flight Research Center to develop science platform aircraft technology as part of the Environmental Research Aircraft and Sensor Technology (ERAST) Program. ERAST was one of NASA's initiatives designed to develop the new technologies needed to continue America's leadership in the highly competitive aerospace industry.</p> <p>For more information on Pathfinder-Plus visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html</a></p> <p>For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 06 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/PyweBdBzhCs> Pathfinder Solar-Powered Wing During Ground Preparations and Flight Over Rogers Dry Lake

This 39-second video taken in September of 1995 shows NASA's Pathfinder Solar-Powered Wing undergoing ground preparations and a low-altitude test flight over Rogers Dry Lake on Edwards Air Force Base in California.

The Pathfinder solar-powered aircraft was designed and fabricated by AeroVironment, Inc., and transferred to NASA's Dryden (now Armstrong) Flight Research Center to develop science platform aircraft technology as part of the Environmental Research Aircraft and Sensor Technology (ERAST) Program.

For more information on Pathfinder visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html>

For more information on the ERAST program visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html>

[0](#)

2017 07 06 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/aq02gmLZ0W8> Pathfinder-Plus Turbulence Measurement Flight Tests

This 40-second video taken September 1, 2005 shows NASA's solar-powered Pathfinder-Plus undergoing Turbulence Measurement Flight Tests over Edwards Air Force Base in California's Mojave Desert.

The Pathfinder-Plus solar-powered aircraft was designed and fabricated by AeroVironment, Inc., and transferred to NASA's Dryden (now Armstrong) Flight Research Center to develop science platform aircraft technology as part of the Environmental Research Aircraft and Sensor Technology (ERAST) Program. ERAST was one of NASA's initiatives designed to develop the new technologies needed to continue America's leadership in the highly competitive aerospace industry.

For more information on Pathfinder-Plus visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html>

For more information on the ERAST program visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html>

[Transcript Link](#)

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tv1u9TG3JwE">https://youtu.be/tv1u9TG3JwE</a>	Pathfinder-Plus Photographing Hawaiian Coffee Fields	This 32-second video taken September 30, 2002 shows NASA's solar-powered Pathfinder-Plus photographing Hawaiian coffee fields and the coffee fields being harvested after the flight data was analyzed.	<a href="#">Transcript Link</a>
				Sensitive infrared and visible-light cameras mounted in small pods underneath the craft's center wing recorded crisp digital images of the ripening coffee fields from the aircraft flying four miles above, and immediately relayed that imagery to the ground. Based upon that imagery, plantation managers were able to determine which fields were most appropriate for harvest.	
				The Pathfinder-Plus solar-powered aircraft was designed and fabricated by AeroVironment, Inc., and then transferred to NASA to develop science platform aircraft technology as part of the Environmental Research Aircraft and Sensor Technology (ERAST) Program. ERAST was one of NASA's initiatives designed to develop the new technologies needed to continue America's leadership in the highly competitive aerospace industry.	
				For more information on Pathfinder visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html</a>	
				For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a>	
2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xjhT7-tnGNM">https://youtu.be/xjhT7-tnGNM</a>	Pathfinder-Plus Coffee Harvest Demo - Hawaii	NASA Coffee Harvest Demo Validates Practicality of UAVs	<a href="#">Transcript Link</a>
				This 53-second video taken September 30, 2002 shows NASA's solar-powered Pathfinder-Plus flying wing again proving its value as an airborne platform for remote sensing and imaging when it flew a demonstration mission over the Kauai Coffee Co. plantations in Hawaii.	
				Sensitive infrared and visible light cameras mounted in small pods underneath the craft's center wing recorded crisp digital images of the ripening coffee fields from the aircraft flying four miles above, and immediately relayed that imagery to the ground. Based upon that imagery, plantation managers were able to determine which fields were most appropriate for harvest.	
				The Pathfinder-Plus solar-powered aircraft was designed and fabricated by AeroVironment, Inc. Later it was transferred to NASA's Dryden (now Armstrong) Flight Research Center to develop science platform aircraft technology as part of the Environmental Research Aircraft and Sensor Technology (ERAST) Program.	
				For more information on Pathfinder visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html</a>	
				For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a>	

2017 07 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IQZeT85toM8">https://youtu.be/IQZeT85toM8</a>	Pathfinder Taking off From Rogers Dry Lakebed	This 27-second video taken September 11, 1995 shows the Pathfinder taking off from Rogers Dry Lakebed near the NASA Dryden (now Armstrong) Flight Research Center on Edwards Air Force Base. Shown from the lakebed side, the video shows Edwards and Dryden in the background.  The aircraft was adopted into NASA's newly-established Environmental Research Aircraft and Sensor Technology (ERAST) project in late 1994. ERAST was one of NASA's initiatives designed to develop the new technologies needed to continue America's leadership in the highly competitive aerospace industry.  For more information on Pathfinder visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-034-DFRC.html</a>  For more information on the ERAST program visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-020-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MJn9cb2L4vE">https://youtu.be/MJn9cb2L4vE</a>	Scientists Prepare for ATTREX Climate Study	This 55-second video released on December 6, 2011 shows NASA and National Oceanic and Atmospheric Administration (NOAA) scientists preparing for the Airborne Tropical Tropopause Experiment (ATTREX), a multi-year airborne campaign to study the humidity and chemical composition of the atmosphere's tropopause layer over the Pacific Ocean in 2013-14. Led by NASA's Ames Research Center, ATTREX focused on small changes that may significantly impact our climate. The ATTREX team checked out 11 specialized instruments on a Global Hawk during several flights from NASA's Dryden (now Armstrong) Flight Research Center.  The Global Hawk aircraft are operated and maintained by Dryden Flight Research Center, Edwards, CA.  To learn more about ATTREX visit: <a href="https://www.nasa.gov/centers/dryden/news/NewsReleases/2011/11-37.html">https://www.nasa.gov/centers/dryden/news/NewsReleases/2011/11-37.html</a>  To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>	<a href="#">Transcript Link</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Oh-9a6D4pXQ">https://youtu.be/Oh-9a6D4pXQ</a>	Global Hawk Test Flight	This 3-minute, 22-second video taken April 5, 2011 shows test flight footage of NASA's Global Hawk.  To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>	<a href="#">Transcript Link</a>

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/VL8AT4K82Q8">https://youtu.be/VL8AT4K82Q8</a>	Global Hawk Instrument Installation	<p>This 3-minute, 37-second video taken in April of 2007 shows NASA and National Oceanic and Atmospheric Administration (NOAA) technicians and scientists preparing and installing a variety of scientific instruments on NASA's Global Hawk in preparation for a mission to study hurricanes.</p> <p>NASA's Global Hawk aircraft are operated and maintained by Dryden (now Armstrong) Flight Research Center, Edwards, CA.</p> <p>To learn more about NASA's Global Hawks visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/p7ZW HLOJU4U">https://youtu.be/p7ZW HLOJU4U</a>	NASA's Global Hawk Prepares for Hurricane Study	<p>This 1-minute, 7-second video taken in December of 2010 shows NASA Jet Propulsion Laboratory technicians pouring liquid nitrogen into a calibration vessel that was then lifted into position next to JPL's High-Altitude Monolithic Microwave integrated Circuit (MMIC) Sounding Radiometer (HAMSr) sensor aboard NASA Global Hawk #872. Next, the NASA Goddard Space Flight Center's High-Altitude Imaging Wind and Rain Airborne Profiler (HiWRAP) sensor is tested after installation on the aircraft. This is followed by additional HAMSr installation footage.</p> <p>The Global Hawk, operated by NASA's Dryden (now Armstrong) Flight Research Center, is seen taking off from a runway at Edwards Air Force Base, CA on a mission to study hurricanes in the Gulf of Mexico and the eastern Atlantic Ocean.</p> <p>To learn more about NASA's Global Hawks visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/loPZBpUctUQ">https://youtu.be/loPZBpUctUQ</a>	Hurricane Instruments Tested During Global Hawk Flight	<p>This 51-second video taken in December of 2010 shows NASA Global Hawk #872, taking off from a runway at Edwards Air Force Base, CA. The aircraft was configured for the 2010 NASA Genesis and Rapid Intensification Processes (GRIP) hurricane mission. The gray fairing seen on the Global Hawk's belly houses a NASA Goddard Space Flight Center sensor.</p> <p>Two Global Hawk aircraft are operated by NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA.</p> <p>To learn more about NASA's Global Hawks visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Y5qrQV4O5x0">https://youtu.be/Y5qrQV4O5x0</a>	NASA's Second Global Hawk Takes to the Skies	This 1-minute, 7-second video taken on May 27, 2010 shows NASA's second Global Hawk Earth sciences aircraft #871 as it took to the skies. This was the aircraft's first checkout flight since being acquired by NASA almost three years ago.	<a href="#">Transcript</a> <a href="#">Link</a>
				The remotely operated craft was the first developmental Global Hawk built by Northrop Grumman Corporation's Ryan Aeronautical division, and was transferred to NASA's Dryden (now Armstrong) Flight Research Center in late 2007 when its test program ended.	
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>	
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/eOiPhb9lsQ">https://youtu.be/eOiPhb9lsQ</a>	NASA's Global Hawk Completes First Functional Check-Flight Over Mojave Desert	This 52-second video taken on October 23, 2009 shows NASA's Global Hawk high-altitude aircraft completing its first functional check flight over California's Mojave Desert.	<a href="#">0</a>
				NASA has two Global Hawk aircraft that are operated and maintained by Dryden (now Armstrong) Flight Research Center, Edwards, CA.	
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>	
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Vf6U8lkUA84">https://youtu.be/Vf6U8lkUA84</a>	Project Manager Chris Naftel Comments on Global Hawk's First Successful NASA Flight	In this 1-minute, 10-second video taken on October 23, 2009, project manager Chris Naftel comments on Global Hawk's first successful flight under NASA's operation.	<a href="#">0</a>
				NASA has two Global Hawk aircraft that are operated and maintained by Dryden (now Armstrong) Flight Research Center, Edwards, CA.	
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>	

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kkDymOxMvE">https://youtu.be/kkDymOxMvE</a>	Global Hawk Project Manager Chris Naftel Comments on NASA's partnership with NOAA	This 54-second video from October 23, 2009 features Global Hawk Project Manager Chris Naftel commenting on NASA's partnership with the National Oceanic and Atmospheric Administration (NOAA). He also speaks about the future missions of NASA's Global Hawk that will be used for observing atmospheric conditions and weather phenomenon.	<a href="#">Q</a>	
				NASA's Dryden (now Armstrong) Flight Research Center operates and maintains one developmental-model Northrop Grumman Global Hawk unmanned aircraft for high-altitude, long-duration Earth science missions. Acquired from the U.S. Air Force, this autonomously flown aircraft is the sixth built under the original Global Hawk Advanced Concept Technology Demonstrator development program sponsored by the Defense Advanced Research Projects Agency.		
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>		
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nwlz331eyN4">https://youtu.be/nwlz331eyN4</a>	Capabilities of NASA's Global Hawk	This 2-minute, 19-second video released January 15, 2009 outlines the long-range and high-altitude capabilities of NASA's Global Hawk unmanned aerial vehicle.	<a href="#">Transcript</a> <a href="#">Link</a>	
				NASA's Dryden (now Armstrong) Flight Research Center operates and maintains one developmental-model Northrop Grumman Global Hawk unmanned aircraft for high-altitude, long-duration Earth science missions. Acquired from the U.S. Air Force, this autonomously flown aircraft is the sixth built under the original Global Hawk Advanced Concept Technology Demonstrator development program sponsored by the Defense Advanced Research Projects Agency.		
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>		
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rm3qOjliGQ">https://youtu.be/rm3qOjliGQ</a>	NASA Dryden Center Director Kevin Petersen Discusses Global Hawk Future Missions.	This 1-minute, 28-second video taken on January 15, 2009 shows NASA Dryden Center Director Kevin Petersen commenting on NASA's planned use of Global Hawks for future Earth science missions.	<a href="#">Q</a>	
				Dryden (now Armstrong) Flight Research Center operates and maintains NASA's Global Hawk autonomously flown aircraft.		
				To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a>		

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Zqr9Z0Up0IU">https://youtu.be/Zqr9Z0Up0IU</a>	Rear Admiral Philip Kenul Outlines NOAA's Plans for the GloPac Mission	<p>This 33-second video taken on January 15, 2009 shows Rear Admiral <a href="#">Philip Kenul</a> outlining the National Oceanic and Atmospheric Administration's (NOAA) plans for the Global Hawk Pacific (GloPac) mission on NASA's Global Hawk.</p> <p>The Global Hawk was manufactured by Northrop Grumman and is operated and maintained by NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA.</p> <p>To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/23N3wG-ow4A">https://youtu.be/23N3wG-ow4A</a>	Unveiling of NASA's First Global Hawk	<p>This 52-second video taken on January 15, 2009 shows the unveiling of NASA's first Global Hawk autonomously operated environmental science aircraft. The aircraft is operated and maintained by NASA's Dryden (now Armstrong) Flight Research Center, Edwards, CA. <a href="#">Transcript Link</a></p> <p>To learn more about NASA's Global Hawks visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jm9rEKDaxHc">https://youtu.be/jm9rEKDaxHc</a>	Dryden Flight Research Center Receives Two Global Hawk Aircraft	<p>This 46-second video taken December 3, 2007 shows the arrival of two Global Hawk aircraft at NASA's Dryden (now Armstrong) Flight Research Center at Edwards, CA. <a href="#">Transcript Link</a></p> <p>To learn more about NASA's Global Hawk aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-098-DFRC.html</a></p>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/loN-H5SAsgM">https://youtu.be/loN-H5SAsgM</a>	Cockpit View of DC-8 Takeoff from Kiruna, Sweden	<p>This 54-second video taken in January of 2000 shows a bumpy takeoff of NASA's DC-8 from a snow and ice covered runway in Kiruna, Sweden during the SAGE III Ozone Loss and Validation Experiment (SOLVE) Campaign. <a href="#">Transcript Link</a></p> <p>The SAGE III Ozone Loss and Validation Experiment (SOLVE) was a measurement campaign designed to examine the processes controlling ozone levels at mid- to high latitudes. Measurements were made in the Arctic high-latitude region in winter using the NASA DC-8 and ER-2 aircraft, as well as balloon platforms and ground-based instruments.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8xZMOoT2WI0">https://youtu.be/8xZMOoT2WI0</a>	DC-8 Taking off from Edwards AFB taking off from Edwards Air Force Base in California.	<a href="#">Transcript Link</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p>				
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p>				
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>				
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>				
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oWeWiAXNCgk">https://youtu.be/oWeWiAXNCgk</a>	Installation of Experiments on NASA's DC-8 Airborne Laboratory.	<a href="#">Transcript Link</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at the NASA Armstrong Flight Research Center facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic and foreign investigators are among those who use NASA's DC-8.</p>				
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science and biology.</p>				
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>				
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>				

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PyrP9UmJHi8">https://youtu.be/PyrP9UmJHi8</a>	DC-8 Taking off from Kiruna, Sweden during SOLVE Campaign	This 32-second video taken January 1, 2000 shows NASA's DC-8 Flying Laboratory taking off from a snow-covered airfield in Kiruna, Sweden during the SAGE III Ozone Loss and Validation Experiment (SOLVE) Campaign.	<a href="#">Transcript</a> <a href="#">Link</a>
				The SOLVE mission was a measurement campaign designed to examine the processes controlling ozone levels at mid- to high latitudes. Measurements were made in the Arctic high-latitude region in winter using the NASA DC-8 and ER-2 aircraft, as well as balloon platforms and ground-based instruments.	
				To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a>	
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/whKI9pmbGA8">https://youtu.be/whKI9pmbGA8</a>	Instruments Mounted to DC-8 Flying Laboratory for TRACE-P Campaign	This 42-second video taken February 1, 2001 shows NASA's DC-8 Flying Laboratory mounted with a variety of instruments supporting experiments to be conducted during the Transport and Chemical Evolution over the Pacific (TRACE-P) Campaign.	<a href="#">Transcript</a> <a href="#">Link</a>
				NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at the NASA Armstrong Flight Research Center facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic and foreign investigators are among those who use NASA's DC-8.	
				Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science and biology.	
				Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.	
				To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a>	

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/G1B_ctBKu0M">https://youtu.be/G1B_ctBKu0M</a>	NASA's DC-8 Flying Laboratory Taking off from Edwards AFB	This 41-second video taken February 1, 2004 shows NASA's DC-8 Flying Laboratory taxiing and taking off from Edwards Air Force Base to study the atmosphere over California for the Airborne Synthetic Aperture Radar (AirSar) 2004 mission.	<a href="#">Transcript</a> <a href="#">Link</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p>					
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p>					
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>					
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>					
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4yTo5aKyTGE">https://youtu.be/4yTo5aKyTGE</a>	NASA's DC-8 Flying Laboratory Crew Collecting Data with an AirSAR Instrument over California	This 41-second video taken February 1, 2004 shows crew members aboard NASA's DC-8 Flying Laboratory collecting data with an Airborne Synthetic Aperture Radar (AirSAR) instrument while flying over California.	<a href="#">0</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p>					
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p>					
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>					
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>					

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9jk0KXl3WIE">https://youtu.be/9jk0KXl3WIE</a>	NASA's DC-8 Flying Laboratory Prepares for an AirSAR Mission over California	This 44-second video taken February 1, 2004 shows an array of instruments that were installed on NASA's DC-8 Flying Laboratory in preparation for an Airborne Synthetic Aperture Radar (AirSAR) Mission over California.	<a href="#">0</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at and operated by NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p>					
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p>					
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>					
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>					
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/LcUqy99pWwU">https://youtu.be/LcUqy99pWwU</a>	NASA DC-8 Researchers Gathering Flight Data During AirSAR 2004 Campaign	This 55-second video taken in March of 2004 shows NASA's DC-8 Flying Laboratory gathering flight data over Costa Rica during the Airborne Synthetic Aperture Radar (AirSAR) 2004 Campaign.	<a href="#">0</a>
<p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p>					
<p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p>					
<p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p>					
<p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>					

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/0qfZq0ut9qs">https://youtu.be/0qfZq0ut9qs</a>	Wildlife in Costa Rican Rain Forest - AirSAR 2004 Mission	<p>This 61-second video shows wildlife filmed by NASA videographers in the La Selva Region of the Costa Rican rain forest during NASA's DC-8 Airborne Synthetic Aperture Radar (AirSAR) 2004 campaign.</p> <p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p> <p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p> <p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cBJahobip5g">https://youtu.be/cBJahobip5g</a>	DC-8 Flying Laboratory Taking off from San Jose, Costa Rica for AirSAR 2004 Mission	<p>This 31-second video taken March 1, 2004 shows NASA's DC-8 Flying Laboratory taking off from San Jose, Costa Rica for an AirSAR 2004 mission.</p> <p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at the NASA Armstrong Flight Research Center facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic and foreign investigators are among those who use NASA's DC-8.</p> <p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science and biology.</p> <p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>	<a href="#">0</a>

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/x2u86M5RB8I">https://youtu.be/x2u86M5RB8I</a>	NASA DC-8 Leaving Dryden for University of North Dakota	This 35-second video shows NASA's DC-8 leaving NASA Dryden after signing a cooperative agreement with the University of North Dakota in Grand Forks, ND. The purpose of the agreement was to create a National Suborbital Education and Research Center (NSERC) at the university with the DC-8 suborbital laboratory as the centerpiece.	<a href="#">Transcript</a> <a href="#">Link</a>	
				The agreement was intended to expand the science conducted using the DC-8 and enhance hands-on educational opportunities for students. The agreement was valued at \$25 million over a five year period. The aircraft was relocated to Grand Forks Air Force Base during its NSERC deployment.		
				To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a>		
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zitWJHWdQKQ">https://youtu.be/zitWJHWdQKQ</a>	Field Emission and Performance Tests of Synthetic Fuels	This 1-minute 32-second video taken in February of 2009 shows NASA researchers conducting field emissions and performance tests of synthetic fuels on NASA's DC-8 laboratory.	<a href="#">Transcript</a> <a href="#">Link</a>	
				NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at the NASA Armstrong Flight Research Center facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic and foreign investigators are among those who use NASA's DC-8.		
				Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science and biology.		
				Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.		
				To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a>		

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/WEfKobZruM">https://youtu.be/WEfKobZruM</a>	Scientists installing Instruments and Probes on NASA's DC-8 Flying Laboratory	<p>This 27 -second video shows scientists installing instruments and probes on NASA's DC-8 flying laboratory for the 2009 Operation IceBridge mission.</p> <p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p> <p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p> <p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>	<a href="#">0</a>
2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IFrrgHRk680">https://youtu.be/IFrrgHRk680</a>	NASA DC-8 Science Instrument Checkout Flight for Operation IceBridge	<p>This 1-minute, 13-second clip video taken on September 17, 2009 shows the DC-8 Flying Laboratory flying a science instrument checkout flight for the 2009 Operation IceBridge Mission.</p> <p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p> <p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p> <p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>	<a href="#">0</a>

2017 07 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Skygb1vUC_A">https://youtu.be/Skygb1vUC_A</a>	NASA Animation Showing Melting Glacial Ice Sheets in Antarctica	<p>This 31-second video from 2009 shows animation of Antarctica, melting of glacial ice sheets and their slide into the ocean.</p> <p>NASA operates a highly modified Douglas DC-8 jetliner as a flying science laboratory. The aircraft, based at NASA Armstrong Flight Research Center's Hangar 703 facility in Palmdale, California, is used to collect data for experiments in support of projects serving the world's scientific community. Federal, state, academic, and foreign investigators are among those who use NASA's DC-8.</p> <p>Data gathered with the aircraft at flight altitude and by remote sensing have been used for studies in archaeology, ecology, geography, hydrology, meteorology, oceanography, volcanology, atmospheric chemistry, cryospheric science, soil science, and biology.</p> <p>Four types of missions are flown with the DC-8: sensor development, satellite sensor verification, space vehicle launch or re-entry telemetry data retrieval and optical tracking, and basic research studies of Earth's surface and atmosphere.</p> <p>To learn more about NASA's DC-8 Flying Laboratory visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-050-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/5KQVe6Rw4_A">https://youtu.be/5KQVe6Rw4_A</a>	Ikhana UAS Gives NASA New Science Technology Research Capability	<p>This 35-second video taken March 5, 2007 shows the Ikhana remotely-piloted aircraft taking off.</p> <p>Ikhana, an MQ-9 Predator B aircraft, was built by General Atomics Aeronautical Systems, Inc., and is flown by NASA's Dryden (now Armstrong) Flight Research Center. Ikhana is a Native American Choctaw word meaning intelligent, conscious, or aware. The name is descriptive of the research goals NASA has established for the aircraft and its related systems.</p> <p>To learn more about Ikhana visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/6EXH7BWnhxc">https://youtu.be/6EXH7BWnhxc</a>	Preparations and Test Flight of NASA Earth Science and Technology Development UAV	<p>This 58-second video taken on March 5, 2007 shows the control room at NASA's Dryden (now Armstrong) Flight Research Center and the Ikhana remotely-piloted aircraft during taxi and flight.</p> <p>Ikhana, an MQ-9 Predator B aircraft, was built by General Atomics Aeronautical Systems, Inc. Ikhana is a Native American Choctaw word meaning intelligent, conscious, or aware. The name is descriptive of the research goals NASA has established for the aircraft and its related systems.</p> <p>To learn more about Ikhana visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html</a></p>	<a href="#">0</a>

2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fWFgXBLk9mw">https://youtu.be/fWFgXBLk9mw</a>	Ikhana Flying Over California's Mojave Desert During its Transfer to Dryden Flight Research Center	This 49-second video taken June 23, 2007 shows in-flight footage of the Ikhana aircraft during its transfer flight to Dryden (now Armstrong) Flight Research Center in California's Mojave Desert.	<a href="#">Q</a>
				The Ikhana aircraft, an MQ-9 Predator B, was built by General Atomics Aeronautical Systems Inc. Ikhana is a Native American Choctaw word meaning intelligent, conscious, or aware. The name is descriptive of the research goals NASA has established for the aircraft and its related systems.	
				To learn more about Ikhana visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html</a>	
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-OHuEdU2XgQ">https://youtu.be/-OHuEdU2XgQ</a>	Ikhana Initial Landing After its Transfer Flight to Dryden Flight Research Center	This 43-second video taken on June 23, 2007 shows arrival of the Ikhana aircraft at Dryden (now Armstrong) Flight Research Center.	<a href="#">Q</a>
				Ikhana, an MQ-9 Predator B, was built by General Atomics Aeronautical Systems Inc. Ikhana is a Native American Choctaw word meaning intelligent, conscious, or aware. The name is descriptive of the research goals NASA has established for the aircraft and its related systems.	
				To learn more about Ikhana visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html</a>	
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SCUW4LBxqVE">https://youtu.be/SCUW4LBxqVE</a>	NASA's Ikhana Flies a Thermal-Infrared Imaging Device During the Western States Fire Mission	This 45-second video taken on August 16, 2007 shows NASA Dryden (now Armstrong) Flight Research Center's Ikhana unmanned aircraft flying the thermal-infrared imaging device that was used during the Western States Fire Mission.	<a href="#">Q</a>
				The Ikhana aircraft is an MQ-9 Predator B, built by General Atomics Aeronautical Systems, Inc. (GA-ASI). Ikhana is a Native American Choctaw word meaning intelligent, conscious, or aware. The name is descriptive of the research goals NASA has established for the aircraft and its related systems.	
				To learn more about Ikhana visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-097-DFRC.html</a>	
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cKma5q978Vc">https://youtu.be/cKma5q978Vc</a>	HiMAT Hijinks	This 43-second video shows the reaction of retiring NASA Dryden Center Director Kevin Petersen when he found a strange vehicle in his parking spot on April 1, 2009. The Highly Maneuverable Aircraft Technology (HiMAT) aircraft was temporarily "parked" in Petersen's parking space before being placed on permanent display in front of Bldg. 4800 at NASA's Dryden (now Armstrong) Flight Research Center.	<a href="#">Transcript Link</a>
				To learn more about the HiMAT visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-025-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-025-DFRC.html</a>	

2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/J3VtIF8JbHY">https://youtu.be/J3VtIF8JbHY</a>	Helios Prototype Taking off on a Checkout Flight over Kauai, Hawaii	<p>This 37-second video from June 7, 2003 shows the Helios Prototype solar-powered aircraft taking off on a checkout flight over Kauai, Hawaii.</p> <p>This remotely piloted flying wing aircraft was developed by AeroVironment, Inc., of Monrovia, CA with assistance from NASA's Dryden (now Armstrong) Flight Research Center. It was developed under NASA's Environmental Research Aircraft and Sensor Technology (ERAST) project.</p> <p>To learn more about Helios visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-068-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-068-DFRC.html</a></p>	<a href="#">Q</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EGtF-Tcq2M8">https://youtu.be/EGtF-Tcq2M8</a>	Helios Prototype on Checkout Flight over Kauai, Hawaii	<p>This 35-second video taken on June 7, 2003 shows the Helios Prototype solar-powered aircraft on a checkout flight over Kauai, Hawaii. The Helios aircraft was developed by AeroVironment, Inc., of Monrovia, CA with assistance from NASA's Dryden (now Armstrong) Flight Research Center.</p> <p>This remotely piloted flying wing aircraft was developed under NASA's Environmental Research Aircraft and Sensor Technology (ERAST) project.</p> <p>To learn more about Helios visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-068-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-068-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/yR5fLQR8ao">https://youtu.be/yR5fLQR8ao</a>	NASA Dryden's DROID Flight Tests Auto-GCAS	<p>This 1-minute, 53-second video taken on October 1, 2011 shows the NASA Dryden (now Armstrong) Flight Research Center's Dryden Remotely Operated Integrated Drone (DROID) sub-scale test bed aircraft is moving up to the flight test big leagues! The Center's Automatic Collision Avoidance Technology team conducted test flights of new software architecture on the radio-controlled large model aircraft to demonstrate that even the simplest flight systems may benefit from Automatic Ground Collision Avoidance Software (GCAS).</p>	<a href="#">Transcript Link</a>

2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/NMWnCLfrBpg">https://youtu.be/NMWnCLfrBpg</a>	Autonomous Soaring Project	This 57-second movie clip taken August 12, 2005 shows tests of NASA's Autonomous Soaring Project with comments by Project Engineer Michael Allen.	<a href="#">Transcript Link</a>
				A series of research flights at NASA's Dryden (now Armstrong) Flight Research Center in the summer of 2005 validated the premise that using thermal lift could significantly extend the range and endurance of small unmanned air vehicles (UAVs) without a corresponding increase in fuel requirements.	
				Just as sailplanes use thermal lift and updrafts to soar for extended periods of time, the Autonomous Soaring Project flew a lightweight 15-pound motor-glider to demonstrate that the same concept could be applied to small, powered UAVs to both increase their endurance and save energy.	
				The remote-controlled model sailplane was modified to incorporate a small electric motor and an autopilot, the latter reprogrammed to detect thermals or updrafts. The software programmed into the autopilot flew the aircraft on a pre-determined racetrack over the northern portion of Rogers Dry Lake at Edwards Air Force Base until it detected an updraft. As the aircraft rose, the engine automatically shut off and the aircraft circled to stay within the convective lift resulting from the thermal or updraft without any human intervention.	
				A project engineer said the small UAV added 60 minutes to its	
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OftFC H1c Wg">https://youtu.be/OftFC H1c Wg</a>	APV-3 Networked UAV Teaming Experiment	This 42-second video taken on March 17, 2005 shows the takeoff and landing of NASA's APV-3 aircraft for the Networked UAV Teaming Experiment.	<a href="#">Transcript Link</a>
				Engineers and technicians from NASA's Ames Research Center and Dryden (now Armstrong) Flight Research Center conducted flight tests over a 'virtual' forest fire in early 2005 to evaluate new flight-control software that will allow Uninhabited Aerial Vehicles (UAVs) to autonomously react to obstacles as they fly pre-programmed missions. The tests were conducted over a remote area of Edwards Air Force Base, CA, to investigate cooperative flight strategies for airborne monitoring and surveillance of natural disasters and for atmospheric sampling.	
				Several novel approaches for providing assistance to wildfire suppression crews using a team of two small UAVs were flown, using a combination of rules from nature and robotics to cooperatively transit and search a virtual forest fire. The experiment used several principles derived from studies of fish and bird motions to simultaneously guide the inexpensive robotic UAVs around obstacles such as simulated smoke plumes.	
				The two autopilot-equipped, 12-foot wingspan APV-3 aircraft flew along computer-generated paths and demonstrated the ability to avoid obstacles in a cooperative and synchronized manner, all without the help of flight personnel. The aircraft and software also demonstrated an ability to complete more complex navigation and	

2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/uPXinyS5S1g">https://youtu.be/uPXinyS5S1g</a>	Altair UAV Lifting off on its Maiden Flight	<p>This 37-second video taken June 9, 2003 shows the lift off of the Altair UAV's maiden flight in California's Mojave Desert.</p> <p>The Altair was built by General Atomics Aeronautical Systems, Inc. (GA-ASI) and flown at NASA's Dryden (now Armstrong) Flight Research Center as part of the Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>To learn more about Altair visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Nz0o2RKV6wk">https://youtu.be/Nz0o2RKV6wk</a>	Altair UAV Landing After its Maiden Flight	<p>This 45-second video taken June 9, 2003 shows the landing of the Altair UAV Technology Demonstrator in California's Mojave Desert after the UAV's maiden flight.</p> <p>The Altair was built by General Atomics Aeronautical Systems, Inc., (GA-ASI) and was part of NASA Dryden (now Armstrong) Flight Research Center's Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>To learn more about Altair visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zkl9vXCbvz0">https://youtu.be/zkl9vXCbvz0</a>	NOAA Researchers Install and Checkout Instruments on Altair	<p>This 57-second video taken in April of 2005 shows pre-flight work for a joint series of environmental science demonstration flights with the National Oceanic and Atmospheric Administration (NOAA) on the Altair unmanned aerial vehicle.</p> <p>The Altair/Predator B was part of NASA's now-concluded Environmental Research Aircraft and Sensor Technology (ERAST) program, based at Dryden (now Armstrong) Flight Research Center.</p> <p>The Altair was built by General Atomics Aeronautical Systems Inc. (GA-ASI). NASA called for the San Diego firm to develop and demonstrate technical performance and operational capabilities to meet the needs of the science community.</p> <p>To learn more about Altair visit:  <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>	<a href="#">Transcript Link</a>

2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/c6j653xSHs">https://youtu.be/c6j653xSHs</a>	Remotely- operated Altair Departs on a Joint NOAA NASA Science Mission	<p>This 52-second video taken in April of 2005 shows Altair/Predator B aircraft departing on a joint series of environmental science demonstration flights with NASA and the National Oceanic and Atmospheric Administration (NOAA) on the unmanned aerial vehicle. <a href="#">0</a></p> <p>The Altair was built by General Atomics Aeronautical Systems, Inc., (GA-ASI) and was part of NASA Dryden (now Armstrong) Flight Research Center's Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>To learn more about Altair visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Tb9M91NwoVs">https://youtu.be/Tb9M91NwoVs</a>	NASA NOAA Pilots Control Remotely- Piloted Altair from a Ground Station	<p>This 46-second video taken in April of 2005 shows pilots controlling the unmanned, remotely-operated Altair/Predator B from a ground station during a joint series of environmental science demonstration flights with the National Oceanic and Atmospheric Administration (NOAA) and NASA. <a href="#">0</a></p> <p>The Altair was built by General Atomics Aeronautical Systems, Inc., (GA-ASI) and was part of NASA Dryden (now Armstrong) Flight Research Center's Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>To learn more about Altair visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>
2017 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MbX9ISx1nVk">https://youtu.be/MbX9ISx1nVk</a>	Altair Unmanned Aerial Vehicle Landing After NASA NOAA Environmental Test Flight	<p>This 44-second video taken in April of 2005 shows the Altair unmanned aerial vehicle landing at Edwards Air Force Base in California following a joint NASA/NOAA environmental science demonstration flight. <a href="#">0</a></p> <p>The Altair was built by General Atomics Aeronautical Systems Inc., (GA-ASI) and was part of NASA Dryden (now Armstrong) Flight Research Center's Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>To learn more about Altair visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-073-DFRC.html</a></p>

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jKIEYyQlic">https://youtu.be/jKIEYyQlic</a>	Ground Test Firing of X-1 %232's Rocket Engine at South Base	<p>This 47-second video from the late 1940's shows a ground-test firing of X-1 #2's rocket engine at South Base.</p> <p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier".</p> <p>The first of the three X-1s was glide-tested at Pinecastle Field, FL, in early 1946. The first powered flight of the X-1 was made on Dec. 9, 1946, at Muroc Army Air Field (later redesignated Edwards Air Force Base) with Chalmers Goodlin, a Bell test pilot, at the controls.</p> <p>On Oct. 14, 1947, with USAF Captain Charles "Chuck" Yeager as pilot, the aircraft flew faster than the speed of sound for the first time. Captain Yeager ignited the four-chambered XLR-11 rocket engines after being air-launched from under the bomb bay of a B-29 at 21,000 ft. The 6,000-lb thrust ethyl alcohol/liquid oxygen burning rockets, built by Reaction Motors, Inc., pushed him up to a speed of 700 mph in level flight.</p> <p>Captain Yeager was also the pilot when the X-1 reached its maximum speed of 957 mph. Another USAF pilot. Lt. Col. Frank Everest, Jr., was credited with taking the X-1 to its maximum</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/LajwZYG9aTg">https://youtu.be/LajwZYG9aTg</a>	X-1E Launch and Landing at Edwards	<p>This 45-second video from the late 1950s shows the X-1E launch from a B-29 and the subsequent approach and landing at Edwards Air Force Base in California.</p> <p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier."</p> <p>The first of the three X-1s was glide-tested at Pinecastle Field, FL, in early 1946. The first powered flight of the X-1 was made on Dec. 9, 1946, at Muroc Army Air Field (later redesignated Edwards Air Force Base) with Chalmers Goodlin, a Bell test pilot, at the controls.</p> <p>On Oct. 14, 1947, with USAF Captain Charles "Chuck" Yeager as pilot, the aircraft flew faster than the speed of sound for the first time. Captain Yeager ignited the four-chambered XLR-11 rocket engines after being air-launched from under the bomb bay of a B-29 at 21,000 ft. The 6,000-lb thrust ethyl alcohol/liquid oxygen burning rockets, built by Reaction Motors, Inc., pushed him up to a speed of 700 mph in level flight.</p> <p>Captain Yeager was also the pilot when the X-1 reached its maximum speed of 957 mph. Another USAF pilot. Lt. Col. Frank</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Dyhrn3d9mz0">https://youtu.be/Dyhrn3d9mz0</a>	X-1E and B-29 Taxi and Takeoff from Edwards	This 33-second video from the late 1950s shows the X-1E and B-29 taxi and takeoff from Muroc Army Air Field (now Edwards Air Force Base).	<a href="#">Transcript</a> <a href="#">Link</a>
<p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier".</p>					
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<p>On Oct. 14, 1947, with USAF Captain Charles "Chuck" Yeager as pilot, the aircraft flew faster than the speed of sound for the first time. Captain Yeager ignited the four-chambered XLR-11 rocket engines after being air-launched from under the bomb bay of a B-29 at 21,000 ft. The 6,000-lb thrust ethyl alcohol/liquid oxygen burning rockets, built by Reaction Motors, Inc., pushed him up to a speed of 700 mph in level flight.</p>					
<p>Captain Yeager was also the pilot when the X-1 reached its maximum speed of 957 mph. Another USAF pilot. Lt. Col. Frank</p>					
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/qB3QgWmN6mU">https://youtu.be/qB3QgWmN6mU</a>	X-1 Test Flight over the Mojave Desert	This 29-second video from 1947 shows the preparations, test flight, and landing of the Bell X-1 at Muroc Army Air Field in California's Mojave Desert.	<a href="#">Transcript</a> <a href="#">Link</a>
<p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier."</p>					
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<p>Captain Yeager was also the pilot when the X-1 reached its maximum speed of 957 mph. Another USAF pilot. Lt. Col. Frank</p>					

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xE5WNO_FwwM">https://youtu.be/xE5WNO_FwwM</a>	X-1 Launch from B-29 Mothership	<p>This 33-second video from the mid 1950's shows the X-1 launching from the B-29 mothership over California's Mojave Desert. A single-place monoplane, the X-1 was 31 ft long, 10 ft high, and had a wingspan of 29 ft. It weighed 4,900 lb and carried 8,200 lb of fuel. It had a flush cockpit with a side entrance and no ejection seat.</p> <p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier".</p> <p>The first of the three X-1s was glide-tested at Pinecastle Field, FL, in early 1946. The first powered flight of the X-1 was made on Dec. 9, 1946, at Muroc Army Air Field (later redesignated Edwards Air Force Base) with Chalmers Goodlin, a Bell test pilot, at the controls.</p> <p>On Oct. 14, 1947, with USAF Captain Charles "Chuck" Yeager as pilot, the aircraft flew faster than the speed of sound for the first time. Captain Yeager ignited the four-chambered XLR-11 rocket engines after being air-launched from under the bomb bay of a B-29 at 21,000 ft. The 6,000-lb thrust ethyl alcohol/liquid oxygen burning rockets, built by Reaction Motors, Inc., pushed him up to a speed of 700 mph in level flight.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/6dQWZz2Fr7E">https://youtu.be/6dQWZz2Fr7E</a>	X-1 Drop from B-50 Superfortress	<p>This 33-second video from the late 1950s shows the X-1 #3 being dropped from a B-50 Superfortress at an altitude of about 35,000 feet.</p> <p>The first of the rocket-powered research aircraft, the X-1 (originally designated the XS-1), was a bullet-shaped airplane that was built by the Bell Aircraft Company for the US Air Force and the National Advisory Committee for Aeronautics (NACA). The mission of the X-1 was to investigate the transonic speed range (speeds from just below to just above the speed of sound) and, if possible, to break the "sound barrier".</p> <p>The first of the three X-1s was glide-tested at Pinecastle Field, FL, in early 1946. The first powered flight of the X-1 was made on Dec. 9, 1946, at Muroc Army Air Field (later redesignated Edwards Air Force Base) with Chalmers Goodlin, a Bell test pilot, at the controls.</p> <p>On Oct. 14, 1947, with USAF Captain Charles "Chuck" Yeager as pilot, the aircraft flew faster than the speed of sound for the first time. Captain Yeager ignited the four-chambered XLR-11 rocket engines after being air-launched from under the bomb bay of a B-29 at 21,000 ft. The 6,000-lb thrust ethyl alcohol/liquid oxygen burning rockets, built by Reaction Motors, Inc., pushed him up to a speed of 700 mph in level flight.</p> <p>Captain Yeager was also the pilot when the X-1 reached its maximum speed of 957 mph. Another USAF pilot. Lt. Col. Frank</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/w5-hzNWaNI">https://youtu.be/w5-hzNWaNI</a>	NASA Airborne Science Studying Earth From the Air	In this 1-minute, 59-second video, journalists and social media followers were briefed in January of 2013 on the goals of NASA's Earth science program and the goals of a half-dozen current or near-term Earth science missions. The group learned about how a small fleet of highly specialized aircraft support those missions at an Airborne Science Showcase at NASA Dryden (now Armstrong) Flight Research Center's facilities at Edwards Air Force Base and Hangar 703 in nearby Palmdale, California.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about NASA's Airborne Science Operations visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-074-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-074-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pO7MfHP7J-U">https://youtu.be/pO7MfHP7J-U</a>	DC-8 and ER-2 in Sweden for SOLVE	NASA's DC-8 and ER-2 were deployed to Sweden in August of 2000 to participate in the Sage III Ozone Loss and Validation Experiment (SOLVE).	<a href="#">Transcript</a> <a href="#">Link</a>
				The DC-8 and ER-2 aircraft are operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	
				Duration: 49 seconds.	
				To learn more about NASA's Airborne Science Operations visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-074-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-074-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TeFIBOgfEag">https://youtu.be/TeFIBOgfEag</a>	Airborne Science Safari 2000 Mission	NASA researchers were among more than 100 scientists who conducted extensive and varied field studies as part of the Southern African Regional Science Initiative (SAFARI 2000). The flights and science activities for SAFARI 2000 were based in Pietersburg, Republic of South Africa. NASA's Airborne Science ER-2 high-altitude aircraft, operated by the Dryden (now Armstrong) Flight Research Center, Edwards, CA, made regular research flights from Pietersburg. The aircraft carried instruments that helped validate instruments on NASA's Terra satellite.	<a href="#">Transcript</a> <a href="#">Link</a>
				The ER-2 carried simulators for three of Terra's five instruments: Measurements of Pollution in the Troposphere Airborne Simulator (MOPITT-A); the Airborne Multi-angle Imaging Spectro-Radiometer (AirMISR); and the Moderate-resolution Imaging Spectroradiometer (MODIS) Airborne Simulator. In addition, the ER-2 carried a solar flux radiometer, Cloud LIDAR; Scanning High Resolution Interferometer Sounder, and the Leonardo Airborne Simulator.	
				Duration: 31 seconds	
				To learn more about SAFARI 2000 visit: <a href="https://www.nasa.gov/centers/dryden/news/NewsReleases/2000/00-71.html">https://www.nasa.gov/centers/dryden/news/NewsReleases/2000/00-71.html</a>	

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/DK0Wd6143ms">https://youtu.be/DK0Wd6143ms</a>	NASA's G-III Test Bed Begins ACTE Baseline Flights	NASA Dryden's Gulfstream G-III aerodynamics research test bed aircraft, tail # 804, has returned to the air in a new phase of baseline flights in preparation for the Adaptive Compliant Trailing Edge, or ACTE, project. A joint NASA—Air Force Research Laboratory effort, ACTE will evaluate shape-changing, bendable composite flaps that should reduce drag and eliminate a major source of airframe noise.  To learn more about NASA's G-III Environmental Science Research Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BO-RS09B6s">https://youtu.be/BO-RS09B6s</a>	UAVSAR Capabilities Evaluation Flight Aboard NASA's Gulfstream C-20A	This 55-second video taken in September of 2007 shows an Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) capabilities evaluation flight of the Compact Synthetic Aperture Radar Instrument aboard NASA's C-20A Environmental Science Research Aircraft. The Compact Synthetic Aperture Radar Instrument was developed by NASA's Jet Propulsion Laboratory (JPL) in Pasadena, California. The C-20A is operated by NASA's Armstrong Flight Research Center and based in Hangar 703 in Palmdale, CA.  To learn more about NASA's C-20A Environmental Science Research Aircraft and the Compact Synthetic Aperture Radar Instrument visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	<a href="#">0</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aUfFE9POMwY">https://youtu.be/aUfFE9POMwY</a>	Assembly of Synthetic Aperture Radar Instrument at JPL in Pasadena, CA	This 40-second video taken in September of 2007 shows the assembly of the Synthetic Aperture Radar instrument at NASA's Jet Propulsion Laboratory (JPL) in Pasadena, CA. This instrument was carried by NASA Armstrong Flight Research Center's C-20A aircraft which is based in Hangar 703 in Palmdale, CA.  To learn more about the Synthetic Aperture Radar Instrument and NASA's C-20A Environmental Science Research Aircraft that carries it visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	<a href="#">0</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/w5tv5MFufWY">https://youtu.be/w5tv5MFufWY</a>	Gulfstream C-20A Radar Imagery Captured Over the Mojave Desert	This 31-second video taken in September of 2007 shows Gulfstream C-20A radar imagery captured over the Mojave Desert by JPL's Synthetic Aperture Radar instrument. The C-20A aircraft is operated by NASA Armstrong Flight Research Center and based in Hangar 703 in Palmdale, CA.  To learn more about NASA's C-20A Environmental Science Research Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zOgFAcWi0go">https://youtu.be/zOgFAcWi0go</a>	NASA's C-20A UAVSAR Surveys Gulf Oil Spill Area	This 3-minute, 45-second video taken on June 22, 2010 shows NASA's Gulfstream C-20A research aircraft carrying the Jet Propulsion Laboratory's (JPL) sophisticated Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) pod under its belly. The aircraft surveyed the spread of the Gulf of Mexico oil spill during a brief series of flights over the Gulf Coast of the United States. The flights followed previous imaging missions flown by NASA's ER-2 Earth science aircraft with JPL's Airborne Visible/Infrared Imaging Spectrometer (AVIRIS). The C-20A and ER-2 aircraft are operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about NASA's C-20A Environmental Science Research Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MiVUSwhPvMY">https://youtu.be/MiVUSwhPvMY</a>	NASA C-20A Radar Images Mississippi River Levees	This 59-second video taken on June 7, 2011 shows NASA imaging Mississippi River levees with a synthetic aperture radar mounted on a C-20A aircraft to help determine the levees' overall integrity. Part of a multi-agency collaborative effort, the flights complement a multi-year Mississippi State University levee assessment project intended to rapidly assess the levees' condition and to identify, classify, and prioritize potential problems. The C-20A aircraft is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about NASA's C-20A Environmental Science Research Aircraft visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-089-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EdmNWDFKfPBI">https://youtu.be/EdmNWDFKfPBI</a>	SOFIA Observatory Conducts Night Checkout Flight	This spectacular video captures NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) as it flew a nighttime checkout flight over northern and central California the first week of March 2013. The flight conducted verification and validation of aircraft and telescope systems in preparation for instrument commissioning and the Cycle 1 astronomy flights scheduled for spring 2013. The SOFIA aircraft, a 747SP, is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				Duration: 2:37 minutes	
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/JzjO6q16F3Y">https://youtu.be/JzjO6q16F3Y</a>	SOFIA Gets Avionics and Mission Control Systems Upgrades	NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) received major upgrades to its telescope control and avionics systems that will significantly improve their efficiency and operability. The upgrades enhance the pointing and tracking capabilities of the observatory's telescope control system, while the avionics upgrades allow the SOFIA to comply with current airspace regulations. The SOFIA aircraft, a 747SP, is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>	
				Duration: 1 minute, 2 seconds		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bZOHV5gtg8Q">https://youtu.be/bZOHV5gtg8Q</a>	SOFIA Mirror Cleaned to Prepare for Next Missions	The 2.5-meter mirror on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) telescope was cleaned recently in preparation for its first full cycle of science observations. Telescope technicians used water, a mild detergent, and a small filtered blower to remove dust and other material that had adhered to the mirror's surface. The SOFIA aircraft, a 747SP, is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>	
				Duration: 56 seconds		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8QikKyQ1LOQ">https://youtu.be/8QikKyQ1LOQ</a>	Destination Innovation Explores SOFIA Observatory	Destination Innovation is a new video series that explores the research, science, and other projects underway at NASA's Ames Research Center at Moffett Field, California. The second program in the series focused on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) that incorporates a high-tech German-built infrared telescope installed in a highly modified Boeing 747SP for airborne astronomical science missions. The SOFIA aircraft is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>	
				Duration: 9 minutes, 14 seconds		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MbeDVU8VD8s">https://youtu.be/MbeDVU8VD8s</a>	First German Astronomy Ambassadors Fly on SOFIA	Two German educators, Wolfgang Vieser and Jörg Trebs, were the first to represent their country as SOFIA Airborne Astronomy Ambassadors. They flew aboard the Stratospheric Observatory for Infrared Astronomy 747SP July 14, 2011. The teachers observed as scientists collected data using the German Receiver for Astronomy at Terahertz Frequencies (GREAT) instrument installed on the 2.5-meter infrared telescope. The SOFIA aircraft is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>	
				Duration: 57 seconds		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-2mdQmuOI1s">https://youtu.be/-2mdQmuOI1s</a>	SOFIA's GREAT Spectrometer Collects First Imagery	The German Receiver for Astronomy at Terahertz Frequencies, or GREAT, is a high-resolution far-infrared spectrometer that finely divides and sorts light into component colors for detailed analysis. Mounted on the 2.5-meter infrared telescope installed in the Stratospheric Observatory for Infrared Astronomy (SOFIA) flying observatory, GREAT collected its first science spectra on April 6, 2011. SOFIA is operated by NASA's Armstrong Flight Research Center and the German Aerospace Center. The aircraft is based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>	
				Duration: 2:41 minutes		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2j8sK-HZ5DA">https://youtu.be/2j8sK-HZ5DA</a>	SOFIA Observatory Finishes Open- Door Flight Tests	This 1-minute, 17-second video clip from August 20, 2010 shows in-flight footage of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft completing a second series of envelope-expansion flight tests with its telescope door open.	<a href="#">Transcript Link</a>	
				After these flights, the SOFIA was fully cleared for astronomy missions at altitudes up to 45,000 feet and telescope elevations up to 58 degrees. After installation and checkout of the remaining systems, the airborne observatory began its first infrared astronomy missions in late 2010. The SOFIA aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.		
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>		

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QhAEYZlBxNs">https://youtu.be/QhAEYZlBxNs</a>	NASA's Flying Observatory Resumes Test Flights	This 1-minute, 47-second video taken on December 9, 2009 shows NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) as it resumes test flights including the first in-flight opening of the telescope cavity door. The SOFIA aircraft, a 747SP, is operated by NASA Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/9MfxEph57YA">https://youtu.be/9MfxEph57YA</a>	SOFIA 747SP Open-Door Flight Fully Exposes Infrared Telescope for The First Time	This 1-minute, 42-second video taken on December 14, 2009 shows NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) during an open-door flight that fully exposed the 747SP's infrared telescope for the first time. The SOFIA aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EDGkAN7_YEA">https://youtu.be/EDGkAN7_YEA</a>	In-flight Test of Both Telescope Cavity Doors on SOFIA	This 1-minute, 6-second video taken on December 14, 2009 shows both telescope cavity doors of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) opened to 10 percent of their range during a test flight over California's Mojave Desert. The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KsV0ma8b8Og">https://youtu.be/KsV0ma8b8Og</a>	SOFIA Mission Update	This 3-minute, 12-second video released on November 13, 2008 documents the mission goals and infrared telescope technology that will be used on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft. The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	

2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cq2KbboMkJE">https://youtu.be/cq2KbboMkJE</a>	The SOFIA Telescope Being Maneuvered During Nighttime Operational Testing	This 46-second video taken on November 13, 2008 shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) telescope rotating in its cavity during nighttime operational testing at the Dryden Aircraft Operations Facility (now NASA Armstrong Flight Research Center's Hangar 703) in Palmdale, CA.  To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	<a href="#">0</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bTkeFWxQgcw">https://youtu.be/bTkeFWxQgcw</a>	The SOFIA Telescope Rotates in its Cavity During Nighttime Operational Testing	This 32-second video taken on November 13, 2008 shows the SOFIA telescope rotating in its cavity during nighttime operational testing at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.  To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	<a href="#">0</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vmBpgGjmSRM">https://youtu.be/vmBpgGjmSRM</a>	NASA's SOFIA Being Maneuvered for Ground Telescope Operational Testing	This 31-second video taken on November 13, 2008 shows NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) being maneuvered into position for ground telescope operational testing at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.  To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	<a href="#">0</a>
2017 06 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cO43UoNexQ8">https://youtu.be/cO43UoNexQ8</a>	SOFIA Workers Lift and Position SOFIA's Primary Mirror For Reinstallation in NASA's 747SP	This 1-minute, 2-second video taken on October 8, 2008 shows workers lifting and positioning the primary mirror for the 2.5-meter telescope on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA). The SOFIA telescope is housed inside a specially modified Boeing 747 flown out of NASA's Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.  To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	<a href="#">0</a>

2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8_y1cl5wRb8">https://youtu.be/8_y1cl5wRb8</a>	SOFIA Primary Mirror System Being Transported from an Air Force C-17	This 33-second video taken on April 18, 2008 shows the primary mirror system from NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) being transported from an Air Force C-17 after the mirror arrived at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.	<a href="#">Q</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zK2COoMweY4">https://youtu.be/zK2COoMweY4</a>	SOFIA Mirror Assembly Being Transported into the Clean Room	This 1-minute 31-second video taken on April 18, 2008 shows the mirror assembly from NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) being secured on a transport dolly and moved into a clean room at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.	<a href="#">Transcript Link</a>
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZrQVSI_Ae3QA">https://youtu.be/ZrQVSI_Ae3QA</a>	SOFIA's Mirror Assembly is Secured and Moved to a Clean Room.	This 1-minute 31-second video taken on April 18, 2008 shows the mirror assembly for NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) being secured on a transport dolly and moved into a clean room at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.	<a href="#">Transcript Link</a>
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XXxAy-mMapU">https://youtu.be/XXxAy-mMapU</a>	Time-lapse Video of Mirror Assembly Removal on SOFIA	This 31-second time-lapse video taken on April 18, 2008 captures the removal of the mirror assembly from NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA). The aircraft is based at NASA's Armstrong Flight Research Center Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	

2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nkDmzrI9hEw">https://youtu.be/nkDmzrI9hEw</a>	Mirror Assembly Being Removed from SOFIA	This 1-minute, 24-second video taken on April 18, 2008 shows the mirror assembly being secured on a transport dolly and moved from NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft into a clean room at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IK_F42i38M4">https://youtu.be/IK_F42i38M4</a>	Baseline Operational Measurements Collected on SOFIA's Infrared Telescope.	This 57-second video taken on March 10, 2008 shows scientists and telescope operators collecting baseline operational measurements on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) infrared telescope. The aircraft is based in Hangar 703 in Palmdale, CA.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/DmXtHdsQOcw">https://youtu.be/DmXtHdsQOcw</a>	Ground Support Crew Prepares SOFIA's Infrared Telescope for Baseline Operational Measurements.	This 29-second video taken on March 10, 2008 shows ground support crew members preparing SOFIA's infrared telescope for baseline operational measurements at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/6Xa1qvdOujS">https://youtu.be/6Xa1qvdOujS</a>	SOFIA 747SP Approach and Flyover at Dryden Aircraft Operations Facility in Palmdale, CA	This 29-second video taken on January 15, 2008 shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) 747SP's first approach and flyover at the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, CA. The second aircraft is an F/A-18 flying chase; chase pilots are in constant radio contact with research pilots and serve as an "extra set of eyes" to help maintain total flight safety during specific tests and maneuvers.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	

2017 06 27 NASA Armstrong Flight Research Center <https://youtu.be/ThfH9js2LZA> SOFIA 747SP Taking off from Dryden Flight Research Center, Edwards, CA This 33-second video taken on January 14, 2008 shows NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) 747SP taking off from Dryden Flight Research Center (now Armstrong), Edwards, California. [0](#)

To learn more about SOFIA visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html>

2017 06 27 NASA Armstrong Flight Research Center [https://youtu.be/ahCOfN\\_XzeU](https://youtu.be/ahCOfN_XzeU) SOFIA 747SP Approach and Landing at NASA Ames Research Center This 40-second video taken on January 14, 2008 shows the approach and landing of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) 747SP at NASA Ames Research Center, Moffett Field in San Jose, California. [Transcript Link](#)

To learn more about SOFIA visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html>

2017 06 27 NASA Armstrong Flight Research Center <https://youtu.be/sApNPDdyJeU> SOFIA 747SP Being Towed into the Dryden Aircraft Operations Facility This 47-second video taken on January 15, 2008 shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) 747SP being towed into the Dryden Aircraft Operations Facility (now Armstrong Flight Research Center's Hangar 703) in Palmdale, California. [0](#)

To learn more about SOFIA visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html>

2017 06 27 NASA Armstrong Flight Research Center <https://youtu.be/94NY1Gbggvs> Air-to-Air Video Showing SOFIA Airflow Patterns Over the Telescope Cavity Door Lip This 40-second video taken on October 11, 2007 shows the airflow patterns over the telescope cavity door lip on NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft. The flight took place over California's Mojave Desert near Dryden Flight Research Center (now Armstrong Flight Research Center). [0](#)

To learn more about SOFIA visit:  
<https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html>

2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PayzZCjisA">https://youtu.be/PayzZCjisA</a>	SOFIA Airborne Observatory Structural Integrity and Performance Flight Tests at NASA Dryden	This 46-second video from October 11, 2007 shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft undergoing structural integrity and performance flight tests at NASA's Dryden Flight Research Center (now Armstrong Flight Research Center) in California's Mojave Desert.	<a href="#">Q</a>
To learn more about SOFIA visit:					
https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html					
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pOrJKmu9JWk">https://youtu.be/pOrJKmu9JWk</a>	SOFIA Taxi and Takeoff During Initial Flight Tests at NASA Dryden	This 43-second video from October 11, 2007 shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) taxi and takeoff during its initial flight tests at NASA Dryden Flight Research Center (now Armstrong Flight Research Center).	<a href="#">Transcript Link</a>
To learn more about SOFIA visit:					
https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html					
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/m8Wb4edte4s">https://youtu.be/m8Wb4edte4s</a>	NASA Animation Showing SOFIA's Cabin and Telescope	This 2-minute, 57-second NASA animation created in 2007 illustrates the movements of the 2.5-meter telescope and the layout of the cabin on the Stratospheric Observatory for Infrared Astronomy (SOFIA).	<a href="#">Transcript Link</a>
The SOFIA aircraft is operated by NASA's Armstrong Flight Research Center and based in Hangar 703, Palmdale, CA.					
To learn more about SOFIA visit:					
https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html					
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/upn3sliRGQU">https://youtu.be/upn3sliRGQU</a>	Debut of NASA's SOFIA at Dryden Flight Research Center	This 3-minute, 10-second video clip from May 31, 2007 shows the debut of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) at Dryden Flight Research Center (now Armstrong Flight Research Center) in Edwards, CA.	<a href="#">Transcript Link</a>
Larry Schilling provides the introduction, followed by Center Director Kevin Petersen. Several guest speakers were also featured at the event and Erik Lindbergh, grandson of famed aviator Charles Lindbergh, re-dedicated the SOFIA Boeing 747SP as the Clipper Lindbergh.					
To learn more about SOFIA visit:					
https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html					

2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gpVjObOo6pM">https://youtu.be/gpVjObOo6pM</a>	Relocation Flight of SOFIA from Waco, Texas to Dryden Flight Research Center	This 1-minute, 55-second video clip from May 31, 2007 shows flight footage of the relocation flight of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) from Waco, Texas to Dryden Flight Research Center (now Armstrong Flight Research Center). The aircraft shown flying chase is an F/A-18; chase pilots are in constant radio contact with research pilots and serve as an "extra set of eyes" to help maintain total flight safety during specific tests and maneuvers. They monitor certain events for the research pilot and are an important safety feature on all research missions.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OQqZrf2dyJU">https://youtu.be/OQqZrf2dyJU</a>	SOFIA Airborne Observatory Arrives at NASA Dryden	This 1-minute, 18-second video clip from May 31, 2007 shows the NASA Stratospheric Observatory for Infrared Astronomy (SOFIA) arriving at NASA Dryden Flight Research Center (now Armstrong) at Edwards, CA. The second aircraft seen is an F/A-18 flying chase; chase pilots are in constant radio contact with research pilots and serve as an "extra set of eyes" to help maintain total flight safety during specific tests and maneuvers. They monitor certain events for the research pilot and are an important safety feature on all research missions.	<a href="#">Transcript Link</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BNUCxYhs4kM">https://youtu.be/BNUCxYhs4kM</a>	Maiden Flight of NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA)	This 59-second video clip from April 26, 2007 shows NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) performing its maiden flight at Waco, TX.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	
2017 06 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bUrC4vspKTE">https://youtu.be/bUrC4vspKTE</a>	NASA and German Aerospace Agency Engineers Installing 2.5-Meter Telescope on SOFIA	This 53-second video clip from July of 2003 shows NASA and German Aerospace Agency (DLR) engineers installing the 2.5-meter telescope on the Stratospheric Observatory for Infrared Astronomy (SOFIA) modified 747.	<a href="#">0</a>
				To learn more about SOFIA visit: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-096-DFRC.html</a>	

2017 06 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GEpTieWlcns">https://youtu.be/GEpTieWlcns</a>	ATTREX Chapter 6 Legacy	<p>Our atmosphere consists of several layers and each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched a mission called Airborne Tropical Tropopause Experiment (ATTREX) to find answers to these questions.</p> <p>This 10-minute, 41-second video features the Global Hawk, which is operated by NASA's Armstrong Flight Research Center, Edwards, CA.</p> <p>To learn more about the ATTREX mission, visit: <a href="https://espo.nasa.gov/missions/attrex">https://espo.nasa.gov/missions/attrex</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 06 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nVOtYD-dWM4">https://youtu.be/nVOtYD-dWM4</a>	COBALT Flight Demonstrations Fuse Technologies	<p>This 5-minute, 50-second video shows how the CoOperative Blending of Autonomous Landing Technologies (COBALT) system pairs new landing sensor technologies that promise to yield the highest precision navigation solution ever tested for NASA space landing applications. The technologies included a navigation doppler lidar (NDL), which provides ultra-precise velocity and line-of-sight range measurements, and the Lander Vision System (LVS), which provides terrain-relative navigation.</p> <p>Through flight campaigns conducted in March and April 2017 aboard Masten Space Systems' Xodiac, a rocket-powered vertical takeoff, vertical landing (VTVL) platform, the COBALT system was flight tested to collect sensor performance data for NDL and LVS and to check the integration and communication between COBALT and the rocket. The flight tests provided excellent performance data for both sensors, as well as valuable information on the integrated performance with the rocket that will be used for subsequent COBALT modifications prior to follow-on flight tests.</p> <p>Based at NASA's Armstrong Flight Research Center in Edwards, CA, the Flight Opportunities program funds technology development flight tests on commercial suborbital space providers of which Masten is a vendor. The program has previously tested the LVS on the Masten rocket and validated the technology for the Mars 2020 rover.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 05 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/i_gEK-rFWDM">https://youtu.be/i_gEK-rFWDM</a>	D-558-II launch from P2B-1S Mothership	This 28-second video from the early 1950s shows the launch of the D-558-II from the P2B-1S Mothership over California's Mojave Desert.	<a href="#">Transcript Link</a>
				The Douglas D-558-II Skyrockets were among the early transonic research airplanes. Three of the single-seat, swept-wing aircraft flew from 1948 to 1956 in a joint program involving the National Advisory Committee for Aeronautics (NACA) - now known as NASA.	
				The Douglas D-558-II Skyrocket airplanes were among the early transonic research airplanes like the X-1, X-4, X-5, and XF-92A. Three of these single-seat, swept-wing aircraft flew from 1948 to 1956 in a joint program involving the NACA; the Navy-Marine Corps; and the Douglas Aircraft Company, Long Beach, CA. Flight research was done at the NACA Muroc Flight Test Unit in California, redesignated in 1949 the High-Speed Flight Research Station (HSFRS). The HSFRS is now known as the NASA Armstrong Flight Research Center, Edwards, CA. The Skyrocket made aviation history when it became the first airplane to fly twice the speed of sound.	
				For more information on the D-558-II, click here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-035-DFRC.html</a>	
2017 05 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/xzcDEXeh8M">https://youtu.be/xzcDEXeh8M</a>	D-558-II pilot entry from P2B- 1S mothership	The Douglas D-558-II "Skyrockets" were among the early transonic research airplanes. Three of the single-seat, swept-wing aircraft flew from 1948 to 1956 in a joint program involving the National Advisory Committee for Aeronautics (NACA) - now known as NASA.	<a href="#">Transcript Link</a>
				This 28-second video clip shows Scott Crossfield descending from the bomb bay of the P2B-1S into the cockpit of the D-558-II, strapping in, and having the hatch closed by a crewmember.	
				Flight research was done at the NACA Muroc Flight Test Unit in California, redesignated in 1949 the High-Speed Flight Research Station (HSFRS). The HSFRS is now known as the NASA Armstrong Flight Research Center, Edwards, CA.	
				The Skyrocket made aviation history when it became the first airplane to fly twice the speed of sound.	

2017 05 10 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/WLDr3wmhWSo> D-558-I Skystreak full power engine runs and taxi tests at Muroc Army Airfield

This 1-minute, 4-second video clip shows D-558-I Skystreak full-power engine runs and taxi tests at Muroc Army Airfield. With assembly complete and its systems checked out, the first Skystreak was ready for its first flight. This was flown by Douglas Aircraft Company test pilot Gene May. In 1947, May was 42 years old, a grandfather, and had been flying for Douglas Aircraft Co. for some six years. This footage was from a Douglas documentary film.

[Q](#)

Conceived in 1945, the D-558-I Skystreak was designed by the Douglas company for the U.S. Navy Bureau of Aeronautics, in conjunction with the NACA (now known as NASA). The first of three Skystreaks made its maiden flight on April 14, 1947 with Douglas test pilot Gene May as its pilot at Muroc Dry Lake (what is now known as Edwards AFB). Less than 4 months later, on Aug. 20, this aircraft set a new world speed record of 640.74 mph. This aircraft was delivered to the NACA in Apr. 1949 but was never flown by the NACA.

The second aircraft was delivered to the NACA in Nov. 1947 and made a total of 19 flights with the NACA before it crashed on takeoff due to compressor disintegration on May 3, 1948 killing NACA pilot Howard C. Lilly. The third aircraft was delivered to the NACA in 1949 and made a total of 78 flights with the NACA before being retired on June 10, 1953.

The Skystreaks were turbojet-powered aircraft that took off from

2017 05 10 NASA  
Armstrong  
Flight  
Research  
Center

<https://youtu.be/MOVdAw9-kG8> D-558-I initial flight at Muroc Army Airfield

This 25-second video clip shows the initial flight of the D-558-I at Muroc Army Airfield.

[Transcript Link](#)

With assembly complete and its systems checked out, the first Skystreak was ready for its first flight. This was flown by Douglas Aircraft Company test pilot Gene May. In 1947, May was 42 years old, a grandfather, and had been flying for Douglas Aircraft Co. for some 6 years. This footage was from a Douglas documentary film.

Conceived in 1945, the D-558-I Skystreak was designed by the Douglas company for the U.S. Navy Bureau of Aeronautics, in conjunction with the NACA (now known as NASA). The first of three Skystreaks made its maiden flight on April 14, 1947 with Douglas test pilot Gene May as its pilot at Muroc Dry Lake (what is now known as Edwards AFB). Less than 4 months later, on Aug. 20, this aircraft set a new world speed record of 640.74 mph. This aircraft was delivered to the NACA in Apr. 1949 but was never flown by the NACA.

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The Skystreaks were turbojet-powered aircraft that took off from

2017 05 10 NASA Armstrong Flight Research Center [https://youtu.be/IsKEwbYjo\\_M](https://youtu.be/IsKEwbYjo_M) Unloading and reassembly of the D-558 Skystreak at Muroc Army Airfield This 1-minute, 6-second video clip shows unloading and reassembly of the D-558 Skystreak at Muroc Army Airfield. [0](#)

The long road trip of the D-558-I and its convoy was completed with their arrival at Muroc. The aircraft was taken off the truck and the re-assembly and check-out process began. The systems aboard the aircraft had to be checked out and ground-tested before the initial taxi tests could be made. Once this was completed, the first flight was scheduled.

Conceived in 1945, the D-558-I Skystreak was designed by the Douglas Aircraft Company for the U.S. Navy Bureau of Aeronautics, in conjunction with the NACA (now known as NASA). The first of three Skystreaks made its maiden flight on April 14, 1947 with Douglas test pilot Gene May as its pilot at Muroc Dry Lake (what is now known as Edwards AFB). Less than 4 months later, on Aug. 20, this aircraft set a new world speed record of 640.74 mph. This aircraft was delivered to the NACA in Apr. 1949 but was never flown by the NACA.

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2017 05 10 NASA Armstrong Flight Research Center <https://youtu.be/F2ilafPjm7c> Transporting the D-558 Skystreak to Muroc Army Airfield for high speed testing-- part 2 Conceived in 1945, the D-558-I Skystreak was designed by the Douglas Aircraft Company for the U.S. Navy Bureau of Aeronautics, in conjunction with the NACA (now known as NASA). The first of three Skystreaks made its maiden flight on April 14, 1947 with Douglas test pilot Gene May as its pilot at Muroc Dry Lake (what is now known as Edwards AFB). [0](#)

Less than 4 months later, on Aug. 20, this aircraft set a new world speed record of 640.74 mph. This aircraft was delivered to the NACA in Apr. 1949 but was never flown by the NACA.

This 39-second video clip shows the D-558 Skystreak being transported to Muroc Army Airfield for high speed testing.

Once the first D-558-I was completed, the research aircraft was disassembled and loaded aboard trucks and taken from the Douglas plant by road to Muroc. This was the usual procedure during the 1940s,1950s, and even into the 1960s for moving experimental and prototype aircraft. The freeway from the Los Angeles area to the Mojave desert did not then exist, and these trips were made on winding, narrow, two-lane desert roads. Police escorts were provided to the slow convoy.

The second aircraft was delivered to the NACA in Nov. 1947 and made a total of 19 flights with the NACA before it crashed on takeoff due to compressor disintegration on May 3, 1948 killing NACA pilot Howard C. Lilly. The third aircraft was delivered to the

2017 05 10 NASA Armstrong Flight Research Center <https://youtu.be/JbBUk8Vaf4Y> Transporting the D-558 Skystreak to Muroc Army Airfield for high speed testing - part 1

Conceived in 1945, the D-558-I Skystreak was designed by the Douglas Aircraft Company for the U.S. Navy Bureau of Aeronautics, in conjunction with the NACA (now known as NASA). The first of three Skystreaks made its maiden flight on April 14, 1947 with Douglas test pilot Gene May as its pilot at Muroc Dry Lake (what is now known as Edwards AFB). Less than 4 months later, on Aug. 20, this aircraft set a new world speed record of 640.74 mph. This aircraft was delivered to the NACA in April 1949 but was never flown by the NACA.

This 58-second video clip shows the D-558 Skystreak being transported to Muroc Army Airfield for high speed testing.

A public display of the first D-558-I Skystreak and the incomplete fuselage of the second aircraft. This took place prior to transport of the first Skystreak to Muroc in early 1947. This footage is from a Douglas Aircraft Co. documentary film made at the time.

The second aircraft was delivered to the NACA in Nov. 1947 and made a total of 19 flights with the NACA before it crashed on takeoff due to compressor disintegration on May 3, 1948 killing NACA pilot Howard C. Lilly. The third aircraft was delivered to the NACA in 1949 and made a total of 78 flights with the NACA before being retired on June 10, 1953.

The Skystreaks were turbojet-powered aircraft that took off from the ground under their own power and had straight wings and tails.

2017 05 01 NASA Armstrong Flight Research Center <https://youtu.be/gdjsfKky4Dw> From the Ground Up Building an Earth Science Satellite (HyspIRI Hawaii, Part 5)

In this 5-minute, 52-second video, scientists from NASA and University of Hawaii, in partnership the U.S. Naval Research Laboratory, teamed up in February 2017 to study the health of coral reefs located around the Hawaiian Islands for the Hyperspectral InfraRed Imager (HyspIRI) airborne preparatory mission. Research divers and an autonomous kayak monitored coral color signatures from the ocean floor and surface, while NASA's high-altitude ER-2 collected images of the same areas from a height of 70,000 ft. The data from these sources are being combined to better understand how coral reef ecosystems are responding to stressful conditions like warming ocean temperatures and water acidification. Data from this mission will potentially help develop a NASA satellite to study natural hazards and ecosystems all over the world.

The ER-2 aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.

Learn more about the HyspIRI airborne mission here:  
<https://www.jpl.nasa.gov/news/news.php?feature=6793>

2017 04 20 NASA Armstrong Flight Research Center <https://youtu.be/kljFd9Aai7c> From the Ground Up Building an Earth Science Satellite (HyspIRI Hawaii, Part 4) In this 5-minute, 5-second video, noxious sulfur dioxide gas and other pollutants emitted from Kilauea Volcano on the Island of Hawai'i react with oxygen and atmospheric moisture to produce volcanic smog (vog) and acid rain. These forms of pollution are recurrent health issues for the citizens of Hawaii. Vog can aggravate preexisting respiratory ailments and create conditions for acid rain, which damages crops and can leach lead into household water supplies. [Q](#)

Scientists from the U.S. Geological Survey's (USGS) Hawaiian Volcano Observatory (HVO) at the summit of Kilauea closely monitor the amount and composition of gas emissions from the volcano's ongoing eruption. In February 2017, NASA scientists joined efforts with USGS, collecting data on the ground and from NASA's high-altitude ER-2 aircraft as part of the Hyperspectral InfraRed Imager (HyspIRI) airborne preparatory mission. Data from this mission will potentially help develop a NASA satellite to study natural hazards and ecosystems, including those affected by volcanic activity.

The ER-2 aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.  
Image credits: NASA/USGS

2017 04 18 NASA Armstrong Flight Research Center <https://youtu.be/XIF6RaK3ZKQ> LSRA STS Tire Test on rim 1995 From 1993 to 1995, in conjunction with other NASA Centers, NASA Dryden Flight Research Center (now Armstrong), in Edwards, CA, used a Convair CV-990 airplane as a Landing Systems Research Aircraft (LSRA) to perform Space Shuttle tire tests. The results provided the Space Shuttle Program with data to support its flight rules and enabled it to resurface a grooved runway at Kennedy Space Center that added unnecessary wear to the Space Shuttle tires. [Transcript Link](#)

Tests were done using a unique fixture mounted in the center of the CV-990 fuselage, between the main landing gear. Landing gear systems from other aircraft could be attached to the test fixture, which lowered them to the runway surface during actual landings. The LSRA had the ability to reproduce the loads and speeds of the other aircraft, as well as simulate crosswind landing conditions in a safe, controlled environment.

The 29-second video clip shows a landing on the concrete runway at Edwards, CA, on August 11, 1995, which concluded the Space Shuttle gear research program. As the Space Shuttle tire was lowered onto the surface, it was destroyed almost instantly. The rim scraped on the concrete, and stopped rolling as it became flat. It heated up and left a flaming trail of hot rubber and aluminum alloy particles. Notice how the fire quickly went out as the test gear was raised, indicating a safer condition than prevailed in a lakebed landing.

2017 04 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KyV3GxxPst8">https://youtu.be/KyV3GxxPst8</a>	ATTREX Chapter 5 Mission in Guam	<p>This 12-minute, 15-second video shows the January 2014 Airborne Tropical Tropopause Experiment (ATTREX). Our atmosphere consists of several layers and each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched the ATTREX mission to find answers to these questions.</p> <p>NASA's unmanned aerial vehicle (UAV) Global Hawk tracked changes in the upper atmosphere to help researchers understand how these changes affect Earth's climate. The Global Hawk is operated by the Armstrong Flight Research Center, Edwards, CA.</p> <p>To learn more about the ATTREX mission, visit: <a href="https://espo.nasa.gov/missions/attrex">https://espo.nasa.gov/missions/attrex</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 04 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/AyoB1E8wpMA">https://youtu.be/AyoB1E8wpMA</a>	NASA Precision Landing Technologies Completes Initial Flight Tests on Vertical Testbed Rocket	<p>This 2-minute, 40-second video shows how over the past 5 weeks, NASA and Masten Space Systems teams have prepared for and conducted sub-orbital rocket flight tests of next-generation lander navigation technology through the CoOperative Blending of Autonomous Landing Technologies (COBALT) project.</p> <p>The COBALT payload was integrated onto Masten's rocket, Xodiac. The Xodiac vehicle used the Global Positioning System (GPS) for navigation during this first campaign, which was intentional to verify and refine COBALT system performance. The joint teams conducted numerous ground verification tests, made modifications in the process, practiced and refined operations' procedures, conducted three tether tests, and have now flown two successful free flights. This successful, collaborative campaign has provided the COBALT and Xodiac teams with the valuable performance data needed to refine the systems and prepare them for the second flight test campaign this summer when the COBALT system will navigate the Xodiac rocket to a precision landing.</p> <p>The technologies within COBALT provide a spacecraft with knowledge during entry, descent, and landing that enables it to precisely navigate and softly land close to surface locations that have been previously too risky to target with current capabilities. The technologies will enable future exploration destinations on Mars, the moon, Europa, and other planets and moons.</p> <p>The two primary navigation components within COBALT include the</p>	<a href="#">0</a>

2017 04 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ts71279n8FE">https://youtu.be/Ts71279n8FE</a> From the Ground Up Building an Earth Science Satellite (HyspIRI Hawaii, Part 3)	<p>Before a satellite is launched into orbit, scientists use instruments on NASA aircraft to calibrate, validate, and refine sensors that are part of current and future satellite payloads. In this 3-minute, 44-second video, data systems analyst Eric Fraim explains how an instrument called MASTER (MODIS Airborne ASTER Simulator) is being used to further develop Earth observing satellites. Flying on board NASA's high-altitude ER-2, MASTER can detect thermal and visible spectral data as it scans air columns between the ground and the aircraft. The instrument was recently used for the Hyperspectral InfraRed Imager (HyspIRI) airborne preparatory mission, which focused on observing coral reef health and volcano emissions and eruptions around the Hawaiian Islands. HyspIRI is a proposed NASA satellite concept that will study natural hazards and ecosystems.</p> <p>The MODIS/ASTER (MASTER) airborne simulator is a joint development involving the Airborne Sensor Facility at the Ames Research Center, the Jet Propulsion Laboratory and the EROS Data Center. NASA's ER-2 aircraft is managed and based at NASA's Armstrong Flight Research Center, Hangar 703 in Palmdale, CA.</p> <p>Read more about the HyspIRI Hawaii mission here:  <a href="https://www.nasa.gov/feature/jpl/nasa-tests-observing-capability-on-hawaiis-coral-reefs">https://www.nasa.gov/feature/jpl/nasa-tests-observing-capability-on-hawaiis-coral-reefs</a></p> <p><a href="https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes">https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes</a></p>	<a href="#">0</a>
2017 04 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MHC0-LZBf1w">https://youtu.be/MHC0-LZBf1w</a> From the Ground Up Building an Earth Science Satellite (HyspIRI Hawaii, Part 2)	<p>In this 2-minute, 37-second video, the Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) flies high aboard NASA's ER-2, using over 224 sensors to identify, measure, and monitor natural features of the Earth's surface and atmosphere based on reflective light from the sun. The instrument was recently used for the Hyperspectral InfraRed Imager (HyspIRI) airborne preparatory mission, which focused on observing coral reef health and volcano emissions and eruptions around the Hawaiian Islands. Data from this mission will help develop a NASA satellite to study natural hazards and ecosystems.</p> <p>The Airborne Visible and Infrared Imaging Spectrometer (AVIRIS) instrument is developed and managed by NASA's Jet Propulsion Laboratory, Pasadena, CA. NASA's ER-2 aircraft is managed and based at NASA's Armstrong Flight Research Center, Hangar 703 in Palmdale, CA.</p> <p>Read more about the HyspIRI Hawaii mission here:  <a href="https://www.nasa.gov/feature/jpl/nasa-tests-observing-capability-on-hawaiis-coral-reefs">https://www.nasa.gov/feature/jpl/nasa-tests-observing-capability-on-hawaiis-coral-reefs</a></p> <p><a href="https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes">https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes</a></p>	<a href="#">0</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pMO5gLNBKKU">https://youtu.be/pMO5gLNBKKU</a>	Controlled Impact Demonstration (CID) flight video montage	<p>This 47-second video shows the Controlled Impact Demonstration (CID). In 1984 NASA Dryden Flight Research Center (now Armstrong) and the Federal Aviation Administration (FAA) teamed up in a unique flight experiment to test the impact of a Boeing 720 aircraft using standard fuel with an additive designed to suppress fire. The additive FM-9, a high molecular-weight long chain polymer, when blended with Jet-A fuel had demonstrated the capability to inhibit ignition and flame propagation of the released fuel in simulated impact tests.</p> <p>On the morning of December 1, 1984, a remotely controlled Boeing 720 transport took off from Edwards Air Force Base (Edwards, CA), made a left-hand departure, and climbed to an altitude of 2300 feet. It then began a descent-to-landing to a specially prepared runway on the east side of Rogers Dry Lake. Final approach was along the roughly 3.8-degree glide slope. The landing gear was left retracted. Passing the decision height of 150 feet above ground level (AGL), the aircraft was slightly to the right of the desired path. Just above that decision point at which the pilot was to execute a "go-around," there appeared to be enough altitude to maneuver back to the centerline of the runway. Data acquisition systems had been activated, and the aircraft was committed to impact. It contacted the ground, left wing low. The fire and smoke took over an hour to extinguish.</p> <p>This flight, called the Controlled Impact Demonstration (CID), was the culmination of more than a year of preparation in a joint</p>	<a href="#">Transcript Link</a>
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/FNsnaHP4Am8">https://youtu.be/FNsnaHP4Am8</a>	Controlled Impact Demonstration (CID) Tail Camera Video	<p>This 27-second video shows the Controlled Impact Demonstration (CID) from the tail camera. In 1984 NASA Dryden Flight Research Center (now Armstrong) and the Federal Aviation Administration (FAA) teamed up in a unique flight experiment to test the impact of a Boeing 720 aircraft using standard fuel with an additive designed to suppress fire. The additive FM-9, a high molecular-weight long chain polymer, when blended with Jet-A fuel had demonstrated the capability to inhibit ignition and flame propagation of the released fuel in simulated impact tests.</p> <p>On the morning of December 1, 1984, a remotely controlled Boeing 720 transport took off from Edwards Air Force Base (Edwards, CA), made a left-hand departure and climbed to an altitude of 2300 feet. It then began a descent-to-landing to a specially prepared runway on the east side of Rogers Dry Lake. Final approach was along the roughly 3.8-degree glide slope. The landing gear was left retracted. Passing the decision height of 150 feet above ground level (AGL), the aircraft was slightly to the right of the desired path. Just above that decision point at which the pilot was to execute a "go-around," there appeared to be enough altitude to maneuver back to the centerline of the runway. Data acquisition systems had been activated, and the aircraft was committed to impact. It contacted the ground, left wing low. The fire and smoke took over an hour to extinguish.</p> <p>The CID was the culmination of more than a year of preparation in a joint research project by NASA and the FAA to test the effectiveness</p>	<a href="#">Transcript Link</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jf1R8RLPUnc">https://youtu.be/jf1R8RLPUnc</a>	Controlled Impact Demonstration (CID) Aircraft Crash Landing	<p>This 29-second video shows the crash landing of the Controlled Impact Demonstration (CID) flight experiment. In 1984 NASA Dryden Flight Research Center (now Armstrong) and the Federal Aviation Administration (FAA) teamed-up in a unique flight experiment to test the impact of a Boeing 720 aircraft using standard fuel with an additive designed to suppress fire. The additive FM-9, a high molecular-weight long-chain polymer, when blended with Jet-A fuel had demonstrated the capability to inhibit ignition and flame propagation of the released fuel in simulated impact tests.</p> <p>On the morning of December 1, 1984, a remotely controlled Boeing 720 transport took off from Edwards Air Force Base (Edwards, CA), made a left-hand departure and climbed to an altitude of 2300 feet. It then began a descent-to-landing to a specially prepared runway on the east side of Rogers Dry Lake. Final approach was along the roughly 3.8-degree glide slope. The landing gear was left retracted. Passing the decision height of 150 feet above ground level (AGL), the aircraft was slightly to the right of the desired path. Just above that decision point at which the pilot was to execute a "go-around," there appeared to be enough altitude to maneuver back to the centerline of the runway. Data acquisition systems had been activated, and the aircraft was committed to impact. It contacted the ground, left wing low. The fire and smoke took over an hour to extinguish.</p> <p>This flight was the culmination of more than a year of preparation in</p>	<a href="#">Transcript Link</a>
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/F1avGYvJBGQ">https://youtu.be/F1avGYvJBGQ</a>	Centurion Solar- powered High- altitude Aircraft in Flight	<p>This 19-second video shows the solar-powered Centurion aircraft in flight. Since 1980 AeroVironment, Inc. (founded in 1971 by the ultra-light airplane innovator Dr. Paul MacCready) had been experimenting with solar-powered aircraft, often in conjunction with the NASA Dryden Flight Research Center (now Armstrong), Edwards, CA. Thus far, AeroVironment, now headquartered in Monrovia, CA, has achieved several altitude records with its Solar Challenger, Pathfinder, and Pathfinder-Plus aircraft. It expected to exceed those records with the newer and larger solar-powered Centurion and its successors the Centelios and Helios vehicles, in the NASA Environmental Research Aircraft and Sensor Technology (ERAST) program.</p> <p>The Centurion was a lightweight, solar-powered, remotely piloted flying wing aircraft that demonstrated the technology of applying solar power for long-duration, high-altitude flight. It was a prototype technology demonstrator for a future fleet of solar-powered aircraft that could stay airborne for weeks or months on scientific sampling and imaging missions or while serving as telecommunications relay platforms. Although it shared many of the design concepts of the Pathfinder, the Centurion had a wingspan of 206 feet, more than twice the 98-foot span of the original Pathfinder and 70-percent longer than the Pathfinder-Plus' 121-foot span. At the same time, Centurion maintained the 8-foot chord (front to rear distance) of the Pathfinder wing, giving the wing an aspect ratio (length-to-chord) of 26 to 1.</p>	<a href="#">Transcript Link</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/28OZoZT_6rk">https://youtu.be/28OZoZT_6rk</a>	B-52H Flying over the Mojave Desert in California	<p>This 34-second movie clip shows the B-52H flying over the Mojave Desert in California.</p> <p>NASA obtained a B-52H bomber from the U.S. Air Force in 2001, intending to use the aircraft as an air-launch and testbed aircraft to support NASA, Air Force, and industry flight research and advanced technology demonstration efforts at NASA's Dryden Flight Research Center (now Armstrong), Edwards, CA.</p> <p>The B-52H replaced Dryden's famous B-52B "008" following that aircraft's retirement on Dec. 17, 2004. However, with no research projects requiring its capabilities on the horizon under NASA's restructured aeronautics research programs, the decision was made to return the aircraft to the Air Force.</p> <p>NASA's venerable B-52B launch aircraft, operated by the NASA Dryden Flight Research Center, participated in some of the most significant projects in aerospace history. At retirement in December 2004, the air launch and research aircraft held the distinction of being NASA's oldest aircraft, as well as being the oldest B-52 on flying status. At the same time, it had the lowest number of flying hours (2443.8) of any B-52 in operation, having been used exclusively in the role it continued to perform so reliably for nearly 50 years. (2003)</p> <p>More information on the B-52 is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-</a></p>	<a href="#">Transcript Link</a>
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-XkMSFbuN8E">https://youtu.be/-XkMSFbuN8E</a>	B-52B Space Shuttle Drag Chute Test #6	<p>This 31-second movie clip shows the B-52B Space Shuttle Drag Chute Test #6.</p> <p>NASA obtained a B-52H bomber from the U.S. Air Force in 2001, intending to use the aircraft as an air-launch and testbed aircraft to support NASA, Air Force, and industry flight research and advanced technology demonstration efforts at NASA's Dryden Flight Research Center (now Armstrong), Edwards, CA.</p> <p>The B-52H replaced Dryden's famous B-52B "008" following that aircraft's retirement on Dec. 17, 2004. However, with no research projects requiring its capabilities on the horizon under NASA's restructured aeronautics research programs, the decision was made to return the aircraft to the Air Force.</p> <p>NASA's venerable B-52B launch aircraft, operated by the NASA Dryden Flight Research Center, participated in some of the most significant projects in aerospace history. At retirement in December 2004, the air launch and research aircraft held the distinction of being NASA's oldest aircraft, as well as being the oldest B-52 on flying status. At the same time, it had the lowest number of flying hours (2443.8) of any B-52 in operation, having been used exclusively in the role it continued to perform so reliably for nearly 50 years. (1990)</p> <p>More information on the B-52 is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-</a></p>	<a href="#">Transcript Link</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ba-fnNHviA">https://youtu.be/Ba-fnNHviA</a>	B-52 Mothership Taking off with X- 43A Pegasus Stack	<p>This 35-second movie clip shows the B-52 Mothership taking off with a X-43A/Pegasus stack.</p> <p>NASA obtained a B-52H bomber from the U.S. Air Force in 2001, intending to use the aircraft as an air-launch and testbed aircraft to support NASA, Air Force, and industry flight research and advanced technology demonstration efforts at NASA's Dryden Flight Research Center (now Armstrong), Edwards, CA.</p> <p>The B-52H replaced Armstrong's famous B-52B "008" following that aircraft's retirement on Dec. 17, 2004. However, with no research projects requiring its capabilities on the horizon under NASA's restructured aeronautics research programs, the decision was made to return the aircraft to the Air Force.</p> <p>NASA's venerable B-52B launch aircraft, operated by the Dryden Flight Research Center, participated in some of the most significant projects in aerospace history. At retirement in December 2004, the air launch and research aircraft held the distinction of being NASA's oldest aircraft, as well as being the oldest B-52 on flying status. At the same time, it had the lowest number of flying hours (2443.8) of any B-52 in operation, having been used exclusively in the role it continued to perform so reliably for nearly 50 years. (2001)</p> <p>More information on the B-52 is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-DFRC.html</a></p>	<a href="#">Transcript Link</a>
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pcV3UtVL2K0">https://youtu.be/pcV3UtVL2K0</a>	B-52 Touch and go Landing	<p>This 35-second video shows NASA's B-52 aircraft performing touch and go landings. NASA obtained a B-52H bomber from the U.S. Air Force in 2001, intending to use the aircraft as an air-launch and testbed aircraft to support NASA, Air Force, and industry flight research and advanced technology demonstration efforts at NASA's Dryden Flight Research Center (now Armstrong), Edwards, CA.</p> <p>The B-52H replaced Armstrong's famous B-52B "008" following that aircraft's retirement on Dec. 17, 2004. However, with no research projects requiring its capabilities on the horizon under NASA's restructured aeronautics research programs, the decision was made to return the aircraft to the Air Force.</p> <p>NASA's venerable B-52B launch aircraft, operated by the NASA Dryden Flight Research Center, participated in some of the most significant projects in aerospace history. At retirement in December 2004, the air launch and research aircraft held the distinction of being NASA's oldest aircraft, as well as being the oldest B-52 on flying status. At the same time, it had the lowest number of flying hours (2443.8) of any B-52 in operation, having been used exclusively in the role it continued to perform so reliably for nearly 50 years. (1967)</p> <p>More information on the B-52 is available here: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-005-DFRC.html</a></p>	<a href="#">Transcript Link</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/roXtyMm1mZk">https://youtu.be/roXtyMm1mZk</a>	B-47A Stratojet	This 31-second video shows the B-47A (49-1900) bomber, the first in the series of tail numbers to be built at the Boeing Aircraft Company in Wichita, KS.	<a href="#">Transcript</a> <a href="#">Link</a>	
				The National Advisory Committee for Aeronautics (NACA) High-Speed Flight Research Station (now the Armstrong Flight Research Center) obtained that B-47A Stratojet (NACA 150) to study the characteristics of a large, flexible swept-wing aircraft in 1953. (1953-1957)		
				For more information on the B-47A, click here: <a href="https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/B-47/index.html">https://www.nasa.gov/centers/armstrong/multimedia/imagegallery/B-47/index.html</a>		
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/glalfMDAwqI">https://youtu.be/glalfMDAwqI</a>	F A-18 Automated Aerial Refueling (AAR) Phase 1	NASA Dryden (now Armstrong) Flight Research Center's Automated Aerial Refueling (AAR) project conducted flight tests to develop analytical models of the flowfield of an aerial refueling drogue for a future automated aerial refueling system for unmanned air vehicles. The study was part of a larger Automated Aerial Refueling program led by Air Force Research Laboratory. AAR used two of Dryden's highly instrumented F/A-18s.	<a href="#">Transcript</a> <a href="#">Link</a>	
				The first aircraft (No. 847) was modified into a tanker by fitting it with an aerial refueling pod similar to that used by the Navy on S-3 Vikings and F/A-18E/Fs. The second aircraft (No. 845) flew as the receiver aircraft during the study to quantify the free-stream hose and drogue dynamics.		
				This 53-second movie clip shows an F/A-18 Automated Aerial Refueling (AAR).		
				Engineers at NASA's Dryden Flight Research Center evaluated the capability of an F/A-18A aircraft as an in-flight refueling tanker to develop analytical models for an automated aerial refueling system for unmanned air vehicles (UAVs).		
				The Automated Aerial Refueling (AAR) project documented how an operational tanker's drogue basket responded when in the presence of the receiver aircraft. Currently little flight-obtained dynamics data exists. For this modeling study, a second F/A-18 was flying as the receiver aircraft.		

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/458453Roho8">https://youtu.be/458453Roho8</a>	AD-1 wing pivoting in flight	<p>This 21-second video shows the Ames-Dryden-1 (AD-1) aircraft, which was designed to investigate the concept of an oblique (pivoting) wing. The wing could be rotated on its center pivot, so that it could be set at its most efficient angle for the speed at which the aircraft was flying.</p> <p>It was designed as a low-cost/low-speed research aircraft to test a pivot wing design. The AD-1 took off with its wing positioned at a right angle with the fuselage. Once in the air, the wing would rotate on its pivot point on the fuselage until it formed a 60-degree angle. The goal was to design a high-speed transport with low drag. The AD-1 made a total of 79 flights, but adverse handling at sharp sweep angles made the approach less attractive.</p> <p>NASA Ames Research Center aeronautical engineer Robert T. Jones conceived the idea of an oblique wing. His wind tunnel studies at Ames (Moffett Field, CA) indicated that an oblique wing design on a supersonic transport might achieve twice the fuel economy of an aircraft with conventional wings. The oblique wing on the AD-1 pivoted about the fuselage, remaining perpendicular to it during slow flight and rotating to angles of up to 60 degrees as aircraft speed increased. Analytical and wind tunnel studies that Jones conducted at Ames indicated that a transport-sized oblique-wing aircraft flying at speeds of up to Mach 1.4 (1.4 times the speed of sound) would have substantially better aerodynamic performance than aircraft with conventional wings.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BlcihBH BeY">https://youtu.be/BlcihBH BeY</a>	AD-1 during a research flight	<p>This 31-second video describes the Ames-Dryden-1 (AD-1) aircraft and how it was designed to investigate the concept of an oblique (pivoting) wing. The wing could be rotated on its center pivot, so that it could be set at its most efficient angle for the speed at which the aircraft was flying.</p> <p>It was designed as a low-cost/low-speed research aircraft to test a pivot wing design. The AD-1 took off with its wing positioned at a right angle with the fuselage. Once in the air, the wing would rotate on its pivot point on the fuselage until it formed a 60 degree angle. The goal was to design a high-speed transport with low drag. The AD-1 made a total of 79 flights, but adverse handling at sharp sweep angles made the approach less attractive.</p> <p>NASA Ames Research Center aeronautical engineer Robert T. Jones conceived the idea of an oblique wing. His wind tunnel studies at Ames (Moffett Field, CA) indicated that an oblique wing design on a supersonic transport might achieve twice the fuel economy of an aircraft with conventional wings. The oblique wing on the AD-1 pivoted about the fuselage, remaining perpendicular to it during slow flight and rotating to angles of up to 60 degrees as aircraft speed increased. Analytical and wind tunnel studies that Jones conducted at Ames indicated that a transport-sized oblique-wing aircraft flying at speeds of up to Mach 1.4 (1.4 times the speed of sound) would have substantially better aerodynamic performance than aircraft with conventional wings.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gWEnwEXIxPE">https://youtu.be/gWEnwEXIxPE</a>	AD-1 aircraft in Flight	<p>This 17-second video describes how the Ames-Dryden-1 (AD-1) aircraft was designed to investigate the concept of an oblique (pivoting) wing. The wing could be rotated on its center pivot, so that it could be set at its most efficient angle for the speed at which the aircraft was flying.</p> <p>It was designed as a low-cost/low-speed research aircraft to test a pivot wing design. The AD-1 took off with its wing positioned at a right angle with the fuselage. Once in the air, the wing would rotate on its pivot point on the fuselage until it formed a 60 degree angle. The goal was to design a high-speed transport with low drag. The AD-1 made a total of 79 flights, but adverse handling at sharp sweep angles made the approach less attractive.</p> <p>NASA Ames Research Center aeronautical engineer Robert T. Jones conceived the idea of an oblique wing. His wind tunnel studies at Ames (Moffett Field, CA) indicated that an oblique wing design on a supersonic transport might achieve twice the fuel economy of an aircraft with conventional wings. The oblique wing on the AD-1 pivoted about the fuselage, remaining perpendicular to it during slow flight and rotating to angles of up to 60 degrees as aircraft speed increased. Analytical and wind tunnel studies that Jones conducted at Ames indicated that a transport-sized oblique-wing aircraft flying at speeds of up to Mach 1.4 (1.4 times the speed of sound) would have substantially better aerodynamic performance than aircraft with conventional wings.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 03 30	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jRSER39btrs">https://youtu.be/jRSER39btrs</a>	ATTREX Chapter 4 Planet Water	<p>Our atmosphere consists of several layers and each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched a mission called Airborne Tropical Tropopause Experiment (ATTREX) to find answers to these questions.</p> <p>To learn more about the ATTREX mission, visit: <a href="https://espo.nasa.gov/missions/attrex">https://espo.nasa.gov/missions/attrex</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 03 29 NASA Armstrong Flight Research Center <https://youtu.be/0VivyyieIQU> Approach and Landing Tests (ALT) - Shuttle Enterprise landing

The Space Shuttle Enterprise never flew in space. It was the first Space Shuttle built (completed on September 17, 1976), and was used only for aeronautical flight testing. The Enterprise arrived at NASA's Dryden (now Armstrong) Flight Research Center in January 1977 for a flight program involving a Boeing 747 airliner that had been modified for use as a Shuttle Carrier Aircraft (SCA).

[Transcript Link](#)

The first flights with the Space Shuttle attached to the SCA were done to find out how well the two vehicles flew together. Five "captive-inactive" flights were made during this test phase; there was no crew in the Enterprise. The next series of tests were done with a flight crew of two on board the Space Shuttle during three captive flights, with the Enterprise piloted and its systems activated. All of this led to the Space Shuttle Approach and Landing Tests (ALT), which began on August 12, 1977.

The ALT program allowed pilots and engineers to learn how the Space Shuttle handled during low-speed flight and landing. The Enterprise was flown by a crew of two after it was released from its pylons on the SCA at an altitude of 19,000 to 26,000 feet.

The Enterprise did not have a propulsion system, but its first four glides to the Rogers Dry Lake runway provided realistic, in-flight simulations of how subsequent Space Shuttles would be flown at the end of an orbital mission. The fifth approach and landing test, with the Enterprise landing on the Edwards Air Force Base concrete runway, revealed a problem with the Space Shuttle flight control

2017 03 29 NASA Armstrong Flight Research Center <https://youtu.be/6-lh3s3Rjro> Approach and Landing Tests - Shuttle Enterprise 747 SCA separation

The Space Shuttle Enterprise never flew in space. It was the first Space Shuttle built (completed on September 17, 1976), and was used only for aeronautical flight testing. The Enterprise arrived at NASA's Dryden (now Armstrong) Flight Research Center in January 1977 for a flight program involving a Boeing 747 airliner that had been modified for use as a Shuttle Carrier Aircraft (SCA).

[Transcript Link](#)

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The ALT program allowed pilots and engineers to learn how the Space Shuttle handled during low-speed flight and landing. The Enterprise was flown by a crew of two after it was released from its pylons on the SCA at an altitude of 19,000 to 26,000 feet.

The Enterprise did not have a propulsion system, but its first four glides to the Rogers Dry Lake runway provided realistic, in-flight simulations of how subsequent Space Shuttles would be flown at the end of an orbital mission. The fifth approach and landing test, with the Enterprise landing on the Edwards Air Force Base concrete runway, revealed a problem with the Space Shuttle flight control

2017 03 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/2MG7HSLTCps">https://youtu.be/2MG7HSLTCps</a>	Approach and Landing Tests (ALT) - Shuttle Enterprise 747 SCA takeoff	<p>The Space Shuttle Enterprise never flew in space. It was the first Space Shuttle built (completed on September 17, 1976), and was used only for aeronautical flight testing. The Enterprise arrived at NASA's Dryden (now Armstrong) Flight Research Center in January 1977 for a flight program involving a Boeing 747 airliner that had been modified for use as a Shuttle Carrier Aircraft (SCA).</p> <p>The first flights with the Space Shuttle attached to the SCA were done to find out how well the two vehicles flew together. Five "captive-inactive" flights were made during this test phase; there was no crew in the Enterprise. The next series of tests were done with a flight crew of two on board the Space Shuttle during three captive flights, with the Enterprise piloted and its systems activated. All of this led to the Space Shuttle Approach and Landing Tests (ALT), which began on August 12, 1977.</p> <p>The ALT program allowed pilots and engineers to learn how the Space Shuttle handled during low-speed flight and landing. The Enterprise was flown by a crew of two after it was released from its pylons on the SCA at an altitude of 19,000 to 26,000 feet.</p> <p>The Enterprise did not have a propulsion system, but its first four glides to the Rogers Dry Lake runway provided realistic, in-flight simulations of how subsequent Space Shuttles would be flown at the end of an orbital mission. The fifth approach and landing test, with the Enterprise landing on the Edwards Air Force Base concrete runway, revealed a problem with the Space Shuttle flight control</p>	<a href="#">0</a>
2017 03 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/u2Ve6wr9EX4">https://youtu.be/u2Ve6wr9EX4</a>	NASA Precise Landing Technologies Tested on Vertical Testbed Rocket	<p>This 1-minute, 30-second video shows how NASA is flight testing next-generation lander navigation technology through the CoOperative Blending of Autonomous Landing Technologies (COBALT) project. The technology provides a spacecraft with knowledge during entry, descent, and landing that enables it to precisely navigate and softly land close to surface locations that have been previously too risky to target with current capabilities. The technologies will enable future exploration destinations on Mars, the moon, Europa, and other planets and moons.</p> <p>The two primary navigation components within COBALT include the Langley Research Center's Navigation Doppler Lidar, which provides ultra-precise velocity and line-of-sight range measurements, and Jet Propulsion Laboratory's Lander Vision System (LVS), which provides navigation estimates relative to an existing surface map. The integrated system is being flight tested onboard a Masten Space Systems suborbital rocket vehicle called Xodiac. The COBALT project is led by the Johnson Space Center, with funding provided through the Game Changing Development, Flight Opportunities program, and Advanced Exploration Systems programs.</p> <p>COBALT free-flight tests, or untethered, on the rocket are coming soon. Based at NASA's Armstrong Flight Research Center in Edwards, CA, the Flight Opportunities program funds technology development flight tests on commercial suborbital space providers of which Masten is a vendor. The program has previously tested the LVS on the Masten rocket and validated the technology for the Mars</p>	<a href="#">0</a>

2017 03 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/iKGeufgQgyc">https://youtu.be/iKGeufgQgyc</a>	NASA Studies Volcanos and Coral Reefs from 65,000 feet (HyspIRI Hawaii, Part 1)	This 6-minute, 8-second video shows how a NASA-led science team spent six weeks in January and February studying Hawaii's volcanoes and coral reefs using the Agency's ER-2 aircraft. The mission, called Hyperspectral InfraRed Imager (HyspIRI), focused on observing coral reef health and volcano emissions and eruptions. Flying at 65,000 feet (19,800 meters), above 95 percent of Earth's atmosphere, the ER-2 can closely replicate the data a future satellite could collect. Data from this mission will help in developing a NASA satellite to study natural hazards and ecosystems.	<a href="#">Q</a>
				NASA's ER-2 aircraft are operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	
2017 03 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nR2zdW43SBE">https://youtu.be/nR2zdW43SBE</a>	ATTREX Chapter 3 Kiss Sky	This 10-minute, 46-second video shows how our atmosphere consists of several layers and each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched a mission called Airborne Tropical Tropopause Experiment (ATTREX) to find answers to these questions.	<a href="#">Transcript Link</a>
				Operated by NASA's Armstrong Flight Research Center, the remotely piloted Global Hawk research aircraft took off from its base at Edwards, CA, to track the transport of water vapor into the upper atmosphere and help researchers understand how greenhouse gases affect Earth's climate.	
				To learn more about the ATTREX mission, visit: <a href="https://espo.nasa.gov/missions/attrex">https://espo.nasa.gov/missions/attrex</a>	
2017 02 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-NFrJFQijFE">https://youtu.be/-NFrJFQijFE</a>	ATTREX Chapter 2 Global Hawk	This 9-minute, 30-second video describes how our atmosphere consists of several layers and how each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched a mission called Airborne Tropical Tropopause Experiment (ATTREX) to find answers to these questions.	<a href="#">Transcript Link</a>
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2017 02 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Zwkr-nsbaus">https://youtu.be/Zwkr-nsbaus</a>	360 View of NASA's ER-2 Cockpit During HyspIRI Hawaii Mission	<p>In this 3-minute, 30-second video, you can take a look inside the cockpit of NASA's high-altitude ER-2 aircraft as it descends for landing at Marine Corps Base Hawaii, Kaneohe Bay. This month scientists have been using the aircraft to collect data on coral reef health and volcanic emissions and eruptions. Flying at 65,000 feet, above 95 percent of Earth's atmosphere, the ER-2 has a unique ability to replicate the data a future satellite could collect. Data from this mission will help in developing a planned NASA satellite mission to study natural hazards and ecosystems called Hyperspectral Infrared Imager, or HyspIRI.</p> <p>The ER-2 high-altitude aircraft is operated by NASA's Armstrong Flight Research Center, Edwards, CA.</p> <p>Read more about the mission here: <a href="https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes">https://www.nasa.gov/feature/jpl/nasa-led-campaign-studies-hawaii-s-iconic-volcanoes</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 02 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ISFfUGPTEsQ">https://youtu.be/ISFfUGPTEsQ</a>	SNC's Dream Chaser Arrives at NASA Armstrong	<p>This 58-second video shows Sierra Nevada Corporation (SNC) delivering its Dream Chaser spacecraft on Jan. 25, 2017, to NASA's Armstrong Flight Research Center in California, located on Edwards Air Force Base. The spacecraft will undergo several months of testing at the Center in preparation for its approach and landing flight on the base's runway.</p> <p>The test series is part of a developmental space act agreement SNC has with NASA's HYPERLINK Commercial Crew Program. The upcoming test campaign will help SNC validate the aerodynamic properties, flight software and control system performance of the Dream Chaser.</p> <p>The Dream Chaser is also being prepared to deliver cargo to the International Space Station under NASA's Commercial Resupply Services 2 (CRS2) contract beginning in 2019. The data that SNC gathers from this test campaign will help influence and inform the final design of the cargo Dream Chaser, which will fly at least six cargo delivery missions to and from the Space Station by 2024.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2017 02 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oearlF3FfYo">https://youtu.be/oearlF3FfYo</a>	Airborne Astronomy Ambassadors Explore with SOFIA, Oct. 19, 2016	<p>This 4-minute, 41-second video highlights the Airborne Astronomy Ambassadors (AAA) program, a professional development program aspiring to improve teaching, inspire students, and inform the community. Flying into the stratosphere on the Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft enables these educators to experience astronomical research first-hand and encourage their students to study Science, Technology, Engineering, and Math.</p> <p>SOFIA is a partnership between NASA and the German Aerospace Center (DLR). The aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.</p> <p>Learn more: <a href="http://go.nasa.gov/2g3v8Mp">http://go.nasa.gov/2g3v8Mp</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2017 02 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/rKyUSSkgC6o">https://youtu.be/rKyUSSkgC6o</a>	ATTREX Chapter 1 What is ATTREX	Our atmosphere consists of several layers and each plays a different role in our climate. The bottom two layers are the troposphere and the stratosphere, and in between these two is a region of colder air known as the Tropopause. It is critical to understand the Tropopause, its composition and interaction with gases, aerosols, and humidity that affect the stratosphere's climate, which ultimately affects the climate in the troposphere. NASA launched a mission called Airborne Tropical Tropopause Experiment (ATTREX) to find answers to these questions.	<a href="#">Transcript</a> <a href="#">Link</a>
				To learn more about the ATTREX mission, visit: <a href="https://espo.nasa.gov/missions/attrex">https://espo.nasa.gov/missions/attrex</a>	
2017 01 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/obnRkM_OYcw">https://youtu.be/obnRkM_OYcw</a>	Tu-144LL 20th Anniversary My own Experience Working in Russia following the Cold War by Glenn Bever	This video contains a 1-hour, 35-minute, and 32-second Brown Bag Lunch seminar featuring Glenn Bever. Glenn is a former deputy director for the Research and Engineering directorate at the Armstrong (formerly Dryden) Flight Research Center. He previously served as chief of the Flight Instrumentation branch and chief of the Flight Systems branch at the Center. He developed embedded systems for research aircraft at the Armstrong for most of his 42 years at NASA.	<a href="#">0</a>
				He also served as the chief engineer for the Automated Aerial Refueling flight project and as chief engineer for C-17 aircraft research flight computing system project. Mr. Bever has worked on at least seventeen aircraft platforms including: F-104, F-16XL, CV-990, SR-71, F-15 DEEC and HIDEDEC, AFTI F-111, F-18, F-15 837, C-17, KC-135, C-140 Jetstar, Army OV-1, and the TU-144LL.	
				For 16 years, Bever was the NASA representative to the NATO Advisory Group for Aerospace Research and Development, AGARD, responsible for publications associated with flight test techniques and flight test instrumentation. Mr. Bever authored the NATO publication, AGARDograph, "Digital Signal Conditioning for Flight Test."	
				Between 1995 and 1999, Bever spent much of his time in Russia as the U.S. instrumentation and onsite engineer for the TU-144LL high-speed research project, which he will be talking about in the video.	
2016 12 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7xQJ2sVQrUA">https://youtu.be/7xQJ2sVQrUA</a>	X-56 Moment of Inertia Tests	In this 3-minute, 44-second video, engineers at NASA's Armstrong Flight Research Center examined the X-56 Multi-Use Technology Testbed as the aircraft underwent "moment of inertia" testing in the Center's Flight Loads Laboratory (FLL).	<a href="#">Transcript</a> <a href="#">Link</a>
				The tests, which were the final series for the vehicle in the FLL, featured a swing test to determine how easy or difficult it is for the vehicle to pitch up or down. Tools to assist researchers during the tests included everything from a laser ball and tracker to a simple stop watch. Data from the tests will go toward updating the finite element model, bringing the team closer to possible flight testing.	

2016 12 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/NNnIfRe4fuA">https://youtu.be/NNnIfRe4fuA</a>	A Look Back 2016 Highlights at NASA Armstrong Flight Research Center	This 2-minute, 40-second video shows how NASA's Armstrong Flight Research Center at Edwards Air Force Base, CA, supported the Agency by providing flight research and technology development, science flight operations in support of astrophysics and earth science, and atmospheric flight validation in 2016.	<a href="#">Q</a>
				Celebrating its 70th anniversary this year, Armstrong is NASA's center of excellence for atmospheric flight research.	
2016 12 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4dMB6NQfXQ">https://youtu.be/4dMB6NQfXQ</a>	Career Profile- Jim Ross, Aerial Photographer	In this 13-minute, 41-second video, you can check out what it takes to “capture the moment” at Mach speeds. The stunning aerial imagery of NASA Armstrong Flight Research Center comes from well-skilled photographers like Jim Ross, Photo Lead.	<a href="#">Transcript Link</a>
				This career profile video highlights Jim’s job responsibilities in documenting aircraft hardware installations, aerial research, and mission work that happens both on-Center and around the world. During Jim’s 27-year career, he has logged over 800 flight hours in twelve different types of aircraft.	
2016 12 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PYYv4GzKC6w">https://youtu.be/PYYv4GzKC6w</a>	German Educators Explore with SOFIA- November 16, 2016	This 3-minute, 39-second video shows the Airborne Astronomy Ambassadors (AAA) program, a professional development program aspiring to improve teaching, inspire students, and inform the community. Flying into the stratosphere on the Stratospheric Observatory for Infrared Astronomy (SOFIA) enables these educators to experience astronomical research first-hand and expose their students to studying Science, Technology, Engineering, and Math. SOFIA is a partnership between NASA and the German Aerospace Center (DLR). The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>
2016 12 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/PsowQlbMRoA">https://youtu.be/PsowQlbMRoA</a>	Santa Shares Flight Experience with NASA	Learn more: <a href="http://go.nasa.gov/2g3v8Mp">http://go.nasa.gov/2g3v8Mp</a> In this 55-second video, Santa takes time off before his Christmas Eve round-the-world trip to share his wisdom on supersonic flight with the pilots and researchers at NASA Armstrong Flight Research Center. To learn more about NASA Armstrong’s supersonic research projects, visit: <a href="https://www.nasa.gov/subject/7566/supersonic-flight/">https://www.nasa.gov/subject/7566/supersonic-flight/</a> .	<a href="#">Transcript Link</a>

From all of us at NASA Armstrong, Happy Holidays!

2016 12 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/k8Gpa2BHIWg">https://youtu.be/k8Gpa2BHIWg</a>	Educators Explore with SOFIA- November 9, 2016	In this 3-minute, 45-second video, the Airborne Astronomy Ambassadors (AAA) program is discussed. The AAA is a professional development program aspiring to improve teaching, inspire students, and inform the community. Flying into the stratosphere on the Stratospheric Observatory for Infrared Astronomy (SOFIA) enables these educators to experience astronomical research first-hand and expose their students to studying Science, Technology, Engineering, and Math (STEM). SOFIA is a partnership between NASA and the German Aerospace Center (DLR). The SOFIA, a 747SP aircraft, is operated by NASA's Armstrong Flight Research Center and is based at Hangar 703 in Palmdale, CA.	<a href="#">Transcript Link</a>
				Learn more: <a href="http://go.nasa.gov/2g3v8Mp">http://go.nasa.gov/2g3v8Mp</a>	
2016 12 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vOakWBBMrNE">https://youtu.be/vOakWBBMrNE</a>	KORUS-AQ Chapter 6 Legacy	Air quality is a significant environmental concern around the world. Scientists are developing new ways to untangle the different factors that contribute to poor air quality. Korea U.S.-Air Quality (KORUS-AQ) is a joint field study between NASA and the Republic of Korea to advance the ability to monitor air pollution from space.	<a href="#">Transcript Link</a>
				NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.	
				This 9-minute, 34-second video is the sixth and final part of a series that shows how the findings from this mission will help develop observing systems using models and data to improve air quality assessments for decision makers.	
2016 12 09	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fh_6DM2OVeY">https://youtu.be/fh_6DM2OVeY</a>	KORUS-AQ Chapter 5 Science on the Fly	Air quality is a significant environmental concern around the world. Scientists are developing new ways to untangle the different factors that contribute to poor air quality. Korea U.S.-Air Quality (KORUS-AQ) is a joint field study between NASA and the Republic of Korea to advance the ability to monitor air pollution from space.	<a href="#">Transcript Link</a>
				NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.	
				This 7-minute, 7-second video is part five in a series that shows how the findings from this mission will help develop observing systems using models and data to improve air quality assessments for decision makers.	
2016 12 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/J9UdsWr6f-s">https://youtu.be/J9UdsWr6f-s</a>	KORUS-AQ Chapter 4 Airborne Laboratory	Air quality is a significant environmental concern around the world. Scientists are developing new ways to untangle the different factors that contribute to poor air quality. Korea U.S.-Air Quality (KORUS-AQ) is a joint field study between NASA and the Republic of Korea to advance the ability to monitor air pollution from space.	<a href="#">Transcript Link</a>
				NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.	
				This 5-minute, 47-second video is part four in a series that shows how the findings from this mission will help develop observing systems using models and data to improve air quality assessments for decision makers.	

2016 12 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kMuFCbXTRs">https://youtu.be/kMuFCbXTRs</a>	KORUS-AQ Chapter 3 Air Quality Mission in Korea	<p>Air quality is a significant environmental concern around the world. Scientists are developing new ways to untangle the different factors that contribute to poor air quality. Korea U.S.-Air Quality (KORUS-AQ) is a joint field study between NASA and the Republic of Korea to advance the ability to monitor air pollution from space.</p> <p>NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.</p> <p>This 4-minute, 36-second video is part three in a series that shows how the findings from this mission will help develop observing systems using models and data to improve air quality assessments for decision makers.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2016 12 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/VOuXlwSqU5o">https://youtu.be/VOuXlwSqU5o</a>	KORUS-AQ Chapter 2 Air Quality	<p>Air quality is a significant environmental concern around the world. Scientists are developing new ways to untangle the different factors that contribute to poor air quality. Korea U.S.-Air Quality (KORUS-AQ) is a joint field study between NASA and the Republic of Korea to advance the ability to monitor air pollution from space.</p> <p>NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.</p> <p>This 5-minute, 36-second video is part two in a series that shows how the findings from this mission will help develop observing systems using models and data to improve air quality assessments for decision makers.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2016 12 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/5jBr6Mu55Z8">https://youtu.be/5jBr6Mu55Z8</a>	KORUS-AQ Chapter 1 Smog Alert!	<p>On July 26, 1943, Los Angeles experienced an extreme smog event so bad that the city thought it was under attack from foreign enemies. However, it was not an attack from the outside, but rather pollution from inside the city causing these "smog attacks." Other U.S. cities were experiencing similar events, which led scientists and government officials to pay closer attention to the effects emissions have on air quality.</p> <p>Advances in technology and measurement of air quality have improved over the last few decades and have led to policy changes world-wide to improve emission standards. These measurements have also helped emerging economies to better plan how to limit industry emissions.</p> <p>This year NASA and the Korean government teamed up for the Korean U.S. Air Quality mission (KORUS-AQ). This 6-minute, 3-second video describes how the agencies used ground sensors and aircraft to conduct research over the Korean Peninsula to increase their understanding of the chemical processes that influence air quality, and ultimately the health of millions of people.</p> <p>NASA's Armstrong Flight Research Center provided aircraft support, operations, and management of the DC-8 flying laboratory that was used for these missions.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2016 11 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/RBI-rlcu5j8">https://youtu.be/RBI-rlcu5j8</a>	German Educators Fly and Observe Aboard SOFIA	<p>In this 3-minute, 13-second video, four German educators flew on the Stratospheric Observatory for Infrared Astronomy (SOFIA) in May 2016 as part of the Airborne Astronomy Ambassadors (AAA) program. Flying on SOFIA as Airborne Astronomy Ambassadors lets teachers experience world-class astronomy first-hand, and gives them tools to inspire their students to pursue careers in Science, Technology, Engineering, &amp; Math (STEM).</p> <p>SOFIA is a partnership between NASA and the German Aerospace Center (DLR). The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.</p> <p>For more information on SOFIA visit: <a href="http://www.nasa.gov/mission_pages/SOFIA/index.html">http://www.nasa.gov/mission_pages/SOFIA/index.html</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>
2016 11 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gwylNMeJHp4">https://youtu.be/gwylNMeJHp4</a>	X-56 Full-Body Ground Vibration Tests	<p>This 2-minute, 21-second video shows how NASA Armstrong Flight Research Center engineers performed ground vibration testing on the X-56 Multi-Use Technology Testbed, at the Center's Flight Loads Laboratory in Edwards, CA.</p> <p>Simulating a "free-free" flight environment, the aircraft was suspended in the air using a bungee system, and was subjected to sensors placed throughout the aircraft measured responses from accelerometers. Data provided will help engineers better understand motion patterns imposed by outside forces, and overall structural behavior.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2016 11 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8q8ToG1OYck">https://youtu.be/8q8ToG1OYck</a>	NASA Community College Aerospace Scholars, Fall 2016	<p>College Students from around the country test their Mars Rovers:</p> <p>In this 3-minute, 27-second video, college students built small prototype Mars rovers at a competition Oct. 16 through 19, 2016 at NASA's Armstrong Flight Research Center's Office of Education at the AERO Institute in Palmdale, CA.</p> <p>The competition was a workshop coordinated and implemented through the NASA Community College Aerospace Scholars, or NCAS program. Forty students from around America participated.</p> <p>Each competition involved scoring points on the activities. In the first competition, students had to design a contraption to retrieve rocks that could scoop them up and automatically take them to their home base.</p> <p>The other challenge had the students rescuing stranded rovers from a mock Martian boulder field. Again, the rovers had to drive automatically to their targets, retrieve them, taking them automatically back to their base. The competitions also included planning a simulated budget for the missions.</p>	<a href="#">Transcript</a> <a href="#">Link</a>

2016 11 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/W2k5hn2PzvA">https://youtu.be/W2k5hn2PzvA</a>	PRANDTL-M Successful Test Flights	Preliminary Aerodynamic Design to Land on Mars (Prandtl-m) is a student-developed NASA educational research activity to build a prototype glider for Mars flight. Designed to fit within a 3U cubesat and fly in the Martian atmosphere, Prandtl-m has some unique challenges.	<a href="#">Transcript Link</a>
				This 3-minute, 50-second video covers some of the progress the team has made, challenges overcome, and includes footage of a few of the first stable, controlled flights of the third generation of this 2-foot, 1-pound aircraft. NASA Armstrong Flight Research Center Chief Scientist and Prandtl-m designer Al Bowers narrates.	
2016 10 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jsHE9HVvxBw">https://youtu.be/jsHE9HVvxBw</a>	U.S. Educators Discover Infrared Astronomy Aboard SOFIA	This 5-minute, 30-second video shows the four U.S. educators who flew on the Stratospheric Observatory for Infrared Astronomy (SOFIA) on Nov. 3, 2015 as Airborne Astronomy Ambassadors (AAA). Flying on SOFIA as Airborne Astronomy Ambassadors lets teachers experience world-class astronomy first-hand, and gives them tools to inspire their students to pursue careers in Science, Technology, Engineering, & Math (STEM).	<a href="#">Transcript Link</a>
				SOFIA is a partnership between NASA and the German Aerospace Center (DLR). The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and is based at Hangar 703 in Palmdale, CA.	
				For more information on SOFIA visit: <a href="http://www.nasa.gov/mission_pages/SOFIA/index.html">http://www.nasa.gov/mission_pages/SOFIA/index.html</a>	
2016 09 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/0mIfahidcbw">https://youtu.be/0mIfahidcbw</a>	NASA Armstrong Flight Research Center 70 Years of Flight Research	This 7-minute, 40-second video showcases 70 years of flight research at NASA's Armstrong Flight Research Center in Edwards, CA, and began airing on NASA television Sept. 26. Armstrong (formerly Dryden Flight Research Center), the Agency's lead center for atmospheric flight research operations, began its storied history in the high desert in September 1946.	<a href="#">Transcript Link</a>
				Initially focused on experimental aircraft called X-planes, flight research with the X-15 rocket plane offered the opportunity to assist with the space mission. The following decades saw Armstrong's mission expanded to include roles in the Space Shuttle program, aviation safety, airborne science, and technology advancement. In addition, the NASA 747SP Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft based at the Center carries the world's largest airborne infrared telescope.	
				Armstrong is returning to the age of X-planes with NASA's first electric propulsion aircraft, named the X-57. That aircraft could lead to advances in fuel efficiency and reductions in noise and emissions. In addition, 70 years after coming to this desert outpost to test the first X-plane to reach supersonic flight, the Center is pursuing research that could lead to another fast, but quieter, X-plane. If successful, that aircraft could substantially decrease the noise made when an aircraft pierces the speed of sound, which could end the prohibition on supersonic flight over land.	
				NASA TV schedules are available at: <a href="http://www.nasa.gov/ntv">http://www.nasa.gov/ntv</a>	

2016 09 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aSzXqlnT7nQ">https://youtu.be/aSzXqlnT7nQ</a>	Declassified footage- F-16 AutoGCAS save	<p>This 1-minute, 21-second video, recently declassified, shows the heads-up-display, or HUD, of an F-16, in which the student pilot experienced a g-induced loss of consciousness.</p> <p>The pilot credits the Automatic Ground Collision Avoidance System (GCAS), developed in-part by NASA's Armstrong Flight Research Center, with saving both the aircraft and his life.</p>	<a href="#">Transcript Link</a>
2016 08 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OeS1h1doQg">https://youtu.be/OeS1h1doQg</a>	Composite Material Loads Testing	<p>Engineers at NASA's Armstrong Flight Research Center tested a composite structure, known as the "Hershey Bar" test article, by exposing it to increasing weight loads. The purpose of the structure is to test and validate ways of developing flexible wings that are structurally and aerodynamically strong. This testing will help engineers prepare for testing of the larger, passing aeroelastic tailored wing, which is scheduled for 2017.</p> <p>Duration: 2 minutes, 2 seconds.</p>	<a href="#">Transcript Link</a>
2016 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KfNtzAMO9tQ">https://youtu.be/KfNtzAMO9tQ</a>	The Internship Experience at NASA Armstrong Flight Research Center	<p>This 5-minute, 59-second video provides an inside look of the internship opportunities at NASA Armstrong Flight Research Center. At Armstrong, interns have the opportunity to pursue their careers, work alongside professionals on innovative projects, and take part in ground-breaking research. Armstrong has internship opportunities for High School, College, and Graduate students across a variety of departments and fields of study.</p> <p>Students leave NASA Armstrong better prepared for their future careers and develop a richer understanding of the field they are going into.</p> <p>For more information about NASA internships, check out <a href="https://intern.nasa.gov">https://intern.nasa.gov</a> and <a href="https://usajobs.gov">https://usajobs.gov</a>.</p>	<a href="#">Transcript Link</a>
2016 07 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/UQwhAX5woPo">https://youtu.be/UQwhAX5woPo</a>	X-57 aircraft arrives in Oceano	<p>This 1-minute, 41-second video shows that NASA's newest experimental aircraft has arrived in Oceano, CA, and will be transferred to Mojave, CA, to be converted into NASA's first piloted all-electric aircraft. The Italian Tecnam P-2006T fuselage will be mated with a special experimental wing to become the X-57 Maxwell.</p> <p>Check out NASA Armstrong Flight Research Center's website for more information:</p> <p><a href="http://www.nasa.gov/centers/armstrong/features/X-57_fuselage_arrives.html">http://www.nasa.gov/centers/armstrong/features/X-57_fuselage_arrives.html</a></p>	<a href="#">Transcript Link</a>

2016 06 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TkhJL-Ub-E">https://youtu.be/TkhJL-Ub-E</a>	Career Profiles - Drawing Controller Kelvin Siu - Operations Engineering Branch	<p>This 8-minute, 20-second video illustrates how the Drawing Control group provides project support in the form of drafting services, drawing version management, and drawing archival. The office provides drafting services through creation of new drawings and sketches, or integration of red-lines. They maintain physical and electronic storage of flight vehicle drawings, and archive all sketches for the AFRC community.</p> <p>This office is the controlling organization for all Armstrong drawing formats and maintains the drawing numbering system for flight vehicle projects.</p>	<a href="#">Q</a>
2016 05 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mZVUa5F7rZM">https://youtu.be/mZVUa5F7rZM</a>	X-56A Ground Vibration Testing	<p>In this 2-minute, 18-second video, researchers at NASA Armstrong Flight Research Center conducted ground vibration testing on the X-56A flex wing, at the Center's Flight Loads Laboratory. Data collected from the impact testing includes Fiber Optic Sensing System (FOSS) information, photogrammetry, flight accelerometers, and ground vibration accelerometers. The testing is important for studying wing characteristics before integration with the fuselage. The X-56A is crucial in testing high-aspect-ratio wings as an element in the design of future long-range aircraft.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2016 05 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fcPJBvhZDYM">https://youtu.be/fcPJBvhZDYM</a>	NASA, Partner Space Agencies Measure Forests In Gabon	<p>In this 8-minute, 46-second video, a contingent of NASA airborne instruments and scientists on the ground joined colleagues from space agencies in Gabon and Europe to study the dense African tropical forests in Gabon. The forest in this Central African country is the second largest in the world next to the Amazon.</p> <p>During the AfriSAR campaign, the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) flew 40,000-feet high mounted beneath a C-20A aircraft from NASA's Armstrong Flight Research Center in Edwards, CA.</p> <p>Data collected during the two-week AfriSAR campaign will help prepare for and calibrate four current and upcoming spaceborne missions for NASA, ESA, and DLR that aim to, among other goals, better gauge the role of forests in Earth's carbon cycle.</p> <p>For additional information: <a href="http://www.nasa.gov/feature/goddard/2016/nasa-partner-space-agencies-measure-forests-in-gabon">http://www.nasa.gov/feature/goddard/2016/nasa-partner-space-agencies-measure-forests-in-gabon</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2016 05 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EUyDZN7rWIY">https://youtu.be/EUyDZN7rWIY</a>	Lancaster Academy of Multimedia, Programming, and Engineering Workshop	<p>This 1-minute, 25-second video shows NASA and the AERO Institute hosting 9th graders from Lancaster High School in a day of hands-on educational activities held on April 25, 2016. The students heard from a human systems integration engineer, took a tour of the fiber optic sensing system lab, checked out the Aerospace Exploration Gallery, learned about the challenges of integrating unmanned aircraft in our National Airspace, role-played in a scenario in which they rescued a stranded child with an unmanned aircraft, and competed in a challenge to build a wind power turbine with the most electrical output.</p> <p>The AERO Institute is a partner of NASA's Armstrong Flight Research Center.</p>	<a href="#">Q</a>
2016 05 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/cPkoDG25ntA">https://youtu.be/cPkoDG25ntA</a>	NASA Community College Aerospace Scholars 2016	<p>This 3-minute, 46-second video shows NASA Community College Aerospace Scholars (NCAS) students from around the country completing an online class on Mars exploration. Some top students of this course visited NASA Armstrong Flight Research Center (AFRC) in April to participate in a team-based robotics competition. During the four-day event, the students took tours of AFRC, participated in internship and resume workshops, heard talks from Center leaders, and competed their Mars rovers. At the end of the event, the teams presented the results of their experience and why their rover design deserves to be selected by NASA judges as the winning concept.</p>	<a href="#">Transcript Link</a>
2016 04 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/YnPfPkVhftQ">https://youtu.be/YnPfPkVhftQ</a>	Preparing NASA's DC-8 for the KORUS-AQ Airborne Mission	<p>This 3-minute video describes the Korea U.S.-Air Quality mission, or KORUS-AQ, a joint field study between NASA and the Republic of Korea aiming to advance the ability to monitor air pollution from space. The campaign, which takes place from May 2 to June 14, will assess air quality across South Korea using observations from aircraft, ground sites, ships, and satellites to test air quality models and remote sensing methods. The team at NASA Armstrong has spent this month preparing the DC-8 flying laboratory with a suite of sensors, probes, and hardware to support the mission.</p> <p>Learn more about the KORUS-AQ mission here: <a href="http://www.nasa.gov/content/2016-earth-expeditions-korus-aq/">http://www.nasa.gov/content/2016-earth-expeditions-korus-aq/</a></p>	<a href="#">Transcript Link</a>

2016 04 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/M2WjYkyaJL8">https://youtu.be/M2WjYkyaJL8</a>	Global Hawk SHOUT	<p>This 7-minute, 6-second video shows how NASA's autonomously flown Global Hawk aircraft flew a series of flights over the Pacific Ocean during February 2016, as part of the NOAA-led mission called Sensing Hazards Operational Unmanned Technology, or SHOUT. This year's El Nino season offered a unique opportunity for the aircraft to contribute data directly to NOAA's El Nino Rapid Response field campaign. The campaign is seeking to determine key mechanisms affecting El Niño's impacts on the U.S. and their implications for improving NOAA's observational systems, models, and predictions.</p> <p>The Global Hawk aircraft offers NASA and NOAA scientists an exclusive vantage point to observe atmospheric conditions with the plane's ability to fly at 65,000 feet for a time period up to 30 hours. These long-endurance and high-altitude observations give NOAA scientists the opportunity to see a larger picture of how atmospheric changes in the tropics are directly impacting weather activity in the Western U.S.</p> <p>NASA's Global Hawks are operated by Armstrong Flight Research Center, Edwards, CA.</p> <p>For more information on NASA's Global Hawk aircraft visit:  <a href="http://www.nasa.gov/centers/armstrong/aircraft/GlobalHawk">http://www.nasa.gov/centers/armstrong/aircraft/GlobalHawk</a>  For more information on the SHOUT mission visit:  <a href="http://uas.noaa.gov/shout">http://uas.noaa.gov/shout</a></p>	<a href="#">Transcript Link</a>
2016 04 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OIY9q3Zeog0">https://youtu.be/OIY9q3Zeog0</a>	X-56 Flexible Wing Static Proof Loads Tests	<p>Among the many tests conducted in the Flight Loads Laboratory at NASA's Armstrong Flight Research Center is static proof loads testing on the X-56 aircraft wing, in this 1-minute, 50-second video.</p> <p>The test included demonstration of the wing's air worthiness and calibration of the wing's instrumentation for flight loads monitoring by applying a number of different spanloads on the structure.</p>	<a href="#">Transcript Link</a>
2016 04 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3lOAlbmLvXQ">https://youtu.be/3lOAlbmLvXQ</a>	Foam Fire- Suppression System More Tests	<p>NASA Armstrong Flight Research Center recently upgraded the foam fire suppression system for the hangars in our Research Aircraft Integration Facility. The safety system uses high expansion foam, which contains less water and chemicals making it more environmentally friendly. The foam is used to help control damage in the event of a fire and prevent the loss of any aircraft.</p> <p>This 4-minute, 31-second video from 2016 shows the new system being tested in the empty hangars to ensure that the consistency of the foam is correct and that it disperses quickly and evenly enough to suffocate a fire.</p>	<a href="#">Transcript Link</a>

2016 04 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/06abRWA_8Yw">https://youtu.be/06abRWA_8Yw</a>	Convergent Aeronautics Solutions	In this 2-minute, 11-second video, researchers from several NASA Centers had an opportunity to share information about revolutionary new technologies at the Convergent Aeronautics Solutions (CAS) Showcase held at Armstrong Flight Research Center in Edwards, CA.  To learn more: <a href="https://www.nasa.gov/aero/nasa-aero-teams-study-wild-ideas.html">https://www.nasa.gov/aero/nasa-aero-teams-study-wild-ideas.html</a>  <a href="http://www.nasa.gov/centers/armstrong/features/CAS_showcase.html">http://www.nasa.gov/centers/armstrong/features/CAS_showcase.html</a>	<a href="#">Transcript Link</a>
2016 03 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tyOLs6OY_zs">https://youtu.be/tyOLs6OY_zs</a>	SCRAT Flight Test Maneuvers	An integral part of NASA's aeronautical research and one of the final phases of testing new technology is flight testing the concept or experiment. While much can be learned from computer modeling, simulations, and wind tunnel testing, taking an experiment to flight is the only way to put experiments in the right condition to accurately and reliably gather data to confirm predictions.  The following 7-minute, 49-second video is a demonstration of a series of flight test and maneuvers carried out at NASA's Armstrong Flight Research Center with the G-III aircraft as part of the Adaptive Compliant Trailing Edge (ACTE) experiments. While some of the inputs to the joystick and other flight controls may seem odd or harsh, they are needed to determine how this aircraft reacts with an experimental flap installed. Data is collected and displayed synchronized to the flight maneuvers.	<a href="#">Transcript Link</a>
2016 03 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/N7g3de-2o5E">https://youtu.be/N7g3de-2o5E</a>	Shedrick Bessent NASA Celebrates African-American History Month	This 5-minute, 41-second video features Shedrick Bessent, who is an instrumentation engineer at NASA's Armstrong Flight Research Center in Edwards, California. He designs, develops, installs, and tests research instrumentation for a wide variety of highly technical aerospace research aircraft.	<a href="#">Transcript Link</a>
2016 03 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Q3YDxxvrGTw">https://youtu.be/Q3YDxxvrGTw</a>	The Mars Airplane Live Event - Al Bowers on PRANDTL-M	On October 16, 2015, students (from middle school to university levels), young professionals, and members of the public had an opportunity to participate in a live event where they learned about the possible first Mars airplane. During "The Mars Airplane Live Event", keynote speaker and NASA Armstrong Chief Scientist Albion Bowers explained the inspiration for the PRANDTL-M (Preliminary Research AerodyNamic Design to Land on Mars) airplane. Mr. Bowers educated the audience on Mars and how PRANDTL-M may be the first airplane to glide through the Martian atmosphere. Mr. Bowers also explained the crucial role that NASA interns play in the development of PRANDTL-M.  The event was jointly hosted by AIAA, the AERO Institute, and NASA Armstrong Flight Research Center.	<a href="#">Transcript Link</a>

2016 03 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nKNP71Vd0J8">https://youtu.be/nKNP71Vd0J8</a>	SPEX Instrument Maiden Flight Aboard NASA ER-2	This 3-minute, 38-second video describes how the Spectral Polarimeter for Planetary Explorations (SPEX) instrument made its first flight aboard NASA's ER-2 high-altitude aircraft in February 2015. The instrument, developed by the Netherlands Institute for Space Research, is designed to measure aerosols within the atmosphere and will later be developed into a space-borne sensor. The aircraft completed a series of three flights to ensure that the instrument will function properly during flight and to prove its viability for future missions.	<a href="#">Transcript</a> <a href="#">Link</a>
2016 02 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ixstbyHhsQ0">https://youtu.be/ixstbyHhsQ0</a>	NASA New Aviation Horizons	NASA's Armstrong Flight Research Center conducts research to advance science, technology, and aeronautics through flight.  This 5-minute, 37-second video highlights some of the flight research and other activities that occurred at NASA Armstrong in 2015 to support the Agency's strategic goals in Earth science, space exploration, next-generation aviation systems, and technology development.	<a href="#">Transcript</a> <a href="#">Link</a>
2016 02 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/CHvADhcFAvk">https://youtu.be/CHvADhcFAvk</a>	Behind the Scenes at NASA Armstrong Information Technology (Code MI), In-Depth	At NASA's Armstrong Flight Research Center, after a flight, the data arrives at the Information Services Branch, or Code MI, which provides information technology solutions for NASA's workforce; everything from desktops to internet connections. Code MI also manages Armstrong's data center and network infrastructure – from routine email to specialized mission-specific flight data. Finally, MI provides multimedia services. From graphic artists, photographers, and videographers to web design and repro; these skilled individuals ensure effective communication of the many activities and accomplishments of the Center.  Like this 2-minute, 37-second video, the multimedia products help make this information accessible to engineers, researchers, partners, stakeholders, around the Center, around the Agency, and out in the public.	<a href="#">0</a>
2016 02 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/hvdc7ZSlVYc">https://youtu.be/hvdc7ZSlVYc</a>	Behind the Scenes at NASA Armstrong Range Operations (Code MR), In-Depth	This 2-minute, 2-second video shows how tracking an aircraft while it's in flight is the responsibility of the NASA Armstrong Flight Research Center's Range Operations Branch, Code MR. From working with the US Air Force, which controls Edwards Airspace, to scheduling flights, to keeping radar dishes locked on a supersonic airplane, to tracking it with long-range optics, Code MR gets the data from the airplane to the ground.  This network of facilities supports aerospace flight research and technology integration, space exploration concepts, airborne remote sensing and science missions, and orations of the International Space Station.	<a href="#">0</a>

2016 02 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/thZ4K17B-dE">https://youtu.be/thZ4K17B-dE</a>	Behind the Scenes at NASA Armstrong Range Engineering (Code MC), In-Depth	Well before the research flight phase, the NASA Armstrong Flight Research Center's Range Engineering Branch (Code MC) engineers and software developers build, integrate, and verify range assets. This is how they ensure the aircraft telemetry can be received and processed for control room display monitoring, that aircraft position can be tracked for situational awareness, and that control room voice communications are working, and, for unmanned aircraft, verify uplinks for command and control and flight termination systems.	<a href="#">0</a>
				This 2-minute, 41-second video demonstrates how Code MC performs range systems engineering, test information engineering, and data processing and display system/software development.	
2016 02 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MOu8-Ki1aVA">https://youtu.be/MOu8-Ki1aVA</a>	Behind the Scenes at NASA Armstrong Simulation Engineering (Code ME), In-Depth	Flights of new aircraft or systems are first simulated to ensure that any novel concepts are working as designed, or to conduct trade studies, or to iterate a design toward optimum performance. Later, when an actual flight is scheduled, before the aircraft even revs its engines, simulation familiarizes the pilot and mission control team with the procedures and test points, and prepares them for unexpected situations.	<a href="#">0</a>
				Engineers in NASA Armstrong Flight Research Center's Code ME, the simulation engineering branch of Code M, create one-of-a-kind simulation programs and hardware subsystem interfaces that enable NASA's pilots and their industry partners to understand how a new aircraft or system will handle, or discover the most efficient ways to hit their data points.	
2016 02 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d88BtNNOEpc">https://youtu.be/d88BtNNOEpc</a>	Behind the Scenes at NASA Armstrong Mission Operations, Code M (Extended Cut)	Whenever a NASA aircraft leaves the ground, a talented team ensures that it executes its mission safely and successfully. This 20-minute, 8-second video highlights a key organization that makes up that team. The pilot and mission controllers sit at the ends of a complex stream of data, along which dozens of IT specialists, engineers, and technicians work to ensure that each in-flight decision is validated by accurate information, and that all test or science data is successfully gathered and processed. At the Armstrong Flight Research Center, this team makes up the Mission Operations Directorate, known simply as Code M, a critical behind-the-scenes force that helps Armstrong keep its reputation as one of the world's finest flight research centers.	<a href="#">0</a>
				Four branches and a business office make up Code M. Every aspect of obtaining flight data happens here; from flight simulation to range engineering and range operations and then finally, information systems, where the downlinked data is retrieved and analyzed at engineers' work stations. The Mission Integration Office or MIO develops partnerships with key researchers, mission directorates, and external stakeholders. The MIO helps create value for our partners by providing an initial interface and a cross-functional integration of processes, capabilities, and operations.	

2016 01 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/IAEYX8NTIfA">https://youtu.be/IAEYX8NTIfA</a>	PTERA - Modular Aircraft Flight Test	Aerospace testing can be costly and time consuming but a new modular, subscale remotely piloted aircraft offers NASA researchers more affordable options for developing a wide range of cutting edge aviation and space technologies.  The Prototype-Technology Evaluation and Research Aircraft (PTERA), developed by Area-I, Inc., of Kennesaw, Georgia, is an extremely versatile and high-quality, yet inexpensive, flying laboratory bridging the gap between wind tunnels and crewed flight testing.	<a href="#">Transcript Link</a>
2015 12 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/peeqxnlSxNw">https://youtu.be/peeqxnlSxNw</a>	Behind the Scenes at NASA Armstrong Mission Operations, Code M	Whenever a NASA aircraft leaves the ground, an entire team of people ensure that it executes its mission safely and successfully. This 8-minute, 25-second video highlights one of the key organizations that makes up that team. The pilot and mission controllers sit at the ends of a complex stream of data, along which dozens of IT specialists, engineers, and technicians work to ensure that each inflight decision is informed by accurate information, and that all test or science data is successfully gathered and processed.  At the Armstrong Flight Research Center, this team makes up the Mission Operations Directorate, known simply as Code M, a critical behind-the-scenes force that helps Armstrong keep its reputation as one of the world's finest flight research centers.	<a href="#">Transcript Link</a>
2015 11 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/OgfcbzxlS_Q">https://youtu.be/OgfcbzxlS_Q</a>	CISBoomDA Interactive Display Provides Pilots with Real-Time Sonic Boom Mapping	This 4-minute, 7-second video describes the Cockpit Interactive Sonic boom display Avionics (CISBoomDa), a revolutionary software system capable of displaying the location and intensity of shock waves caused by supersonic aircraft. Developed by aerospace engineer Ed Haering, technical lead for supersonic aerodynamics research at NASA Armstrong Flight Research Center, and Ken Plotkin of Wyle Laboratories in El Segundo, CA, this application calculates an airplane's sonic boom footprint and provides real-time information, enabling pilots to make the necessary flight adjustments to control the impact of sonic booms on the ground.	<a href="#">0</a>
2015 10 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/FC6WS_o2grNs">https://youtu.be/FC6WS_o2grNs</a>	PRANDTL-D No. 3 Takes Flight	This 1-minute, 45-second video describes how NASA's Preliminary Research Aerodynamic Design to Lower Drag (PRANDTL-D) No. 3 aircraft successfully flew its first flight on Oct. 28, 2015. This flight test is the first of many that are aimed at improving flight efficiency.  Engineers estimate future aircraft could see more than a 30 percent increase in fuel economy. The new wing design eliminates the weight and drag of the modern aircraft tail and its flight control surfaces.  For more information: <a href="http://www.nasa.gov/centers/armstrong/news/FactSheets/FS-106-AFRC.html">http://www.nasa.gov/centers/armstrong/news/FactSheets/FS-106-AFRC.html</a>	<a href="#">Transcript Link</a>

2015 10 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mbnDLUkYtQI">https://youtu.be/mbnDLUkYtQI</a>	Career Profiles - Aero-Mechanical Design Operations Engineering Branch	<p>This 8-minute, 1-second video describes how NASA Armstrong Flight Research Center's Aero-Mechanical Design Group provides mechanical design solutions ranging from research and development to ground support equipment.</p> <p>With an aerospace or mechanical engineering background, team members use the latest computer-aided design software to create one-of-kind parts, assemblies, and drawings, and aid in the design's fabrication and integration. Reverse engineering and inspection of Armstrong's fleet of aircraft is made possible by using state-of-the-art coordinate measuring machines and laser scanning equipment.</p>	<a href="#">Q</a>
2015 10 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/oEuUxp5WpIE">https://youtu.be/oEuUxp5WpIE</a>	Flying with Airborne Astronomy Ambassadors- Sept. 15, 2015	<p>In this 6-minute, 48-second video, educators from Georgia and New Mexico fly on board the Stratospheric Observatory for Infrared Astronomy (SOFIA) and watch science operations first hand. The educators were able to see a number of ways to present their NASA experience that will benefit their diverse student populations. A large variety of science, technology, engineering, and math (STEM) career opportunities became evident during the educators' flight as it takes more than astronomers to make SOFIA a success. As a bonus, the educators were joined by cultural icon Nichelle Nichols, who played Lt. Uhura on the original "Star Trek" series. Nichols has been very active in recruiting under-represented candidates into STEM careers.</p> <p>The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and is based at Hangar 703 in Palmdale, CA.</p>	<a href="#">Transcript Link</a>
2015 09 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GESA08IO09M">https://youtu.be/GESA08IO09M</a>	View of Supermoon Eclipse from NASA's Armstrong Flight Research Center	<p>This 33-second time-lapse video includes scenes of the Sept. 27, 2015 supermoon eclipse, viewed from NASA's Armstrong Flight Research Center in Edwards, CA.</p>	<a href="#">Q</a>
2015 09 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XjIq57AWA0">https://youtu.be/XjIq57AWA0</a>	SOFIA flies near Northern Lights	<p>In this 51-second video, the Aurora Borealis (Northern Lights) were visible from passenger windows on board NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft as it flew over northern Canada, close to the Northern pole, on September 15, 2015. SOFIA observes the universe with an infrared telescope while flying at 40,000 ft. Observations that night included Westerhout 58, a star forming region in the constellation Cygnus, and Elias 3-18, a protostar. Aurora are more easily seen closer to Earth's magnetic poles.</p> <p>The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.</p>	<a href="#">Transcript Link</a>

2015 09 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XOFXA6I7hvs">https://youtu.be/XOFXA6I7hvs</a>	Fused Reality 2015	This 5-minute, 15-second video describes Fused Reality, a new technology for simulation that combines the real world with a virtual world. This was work done under the NASA Armstrong Flight Research Center's Center Innovation Fund (CIF) funded by the Center Chief Technologist David Voracek.	<a href="#">Transcript</a> <a href="#">Link</a>
				The Fused Reality (FR) System was developed under the NASA Small Business Innovative Research Program by Systems Technology Inc.	
2015 09 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/dvgJlWzgmQ">https://youtu.be/dvgJlWzgmQ</a>	Researchers Use the Sun as a Backdrop for Images of Supersonic Shock Waves	In this 7-second video, researchers at NASA's Armstrong Flight Research Center in California use a modern version of schlieren photography to visualize shock waves created by supersonic jet aircraft. With this new technique, shock waves – represented by distortions of the background pattern in a series of images – are accentuated using special mathematical image processing algorithms. This method requires only simple optics and a featured background, that is one with a speckled appearance such as the cratered lunar surface or the mottled appearance of the sun when viewed through certain filters.	<a href="#">0</a>
				The patent-pending technique is called Background Oriented Schlieren using Celestial Objects, or BOSCO.	
2015 09 19	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZjXeTdgD3yE">https://youtu.be/ZjXeTdgD3yE</a>	Nichelle Nichols Lt. Uhura flies aboard SOFIA	In this 1-minute, 59-second video, actress Nichelle Nichols flew on board NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) the world's largest airborne observatory. Ms. Nichols has been collaborating with NASA for years, actively recruiting into the astronaut corps and into STEM careers. In the 1980s, she flew on SOFIA's predecessor, the Kuiper Airborne Observatory.	<a href="#">Transcript</a> <a href="#">Link</a>
				During her flight, Ms. Nichols recorded this short message highlighting the important research NASA is doing to further humankind's exploration of the solar system and beyond. The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and is based at Hangar 703 in Palmdale, CA.	
				Learn more by visiting: <a href="http://www.nasa.gov/solarsystem/">www.nasa.gov/solarsystem/</a>	
2015 09 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/EUw10gRHajE">https://youtu.be/EUw10gRHajE</a>	High Ice Water Content DC-8 Aeronautics Campaign	During the month of August, NASA's DC-8 completed flights in Florida aimed at collecting data on high-altitude crystals for the High Ice Water Content (HIWC) mission. High ice water content can be found within large convective storms and can result in aircraft engines losing power or not functioning properly. Researchers will use the data to develop technology that can be used onboard commercial aircraft to avoid high ice water content conditions and provide a safer flight for passengers.	<a href="#">Transcript</a> <a href="#">Link</a>
				This video gives an inside look at the HIWC mission, including research done in and around Hurricane Danny, as well as a look at the instruments being used onboard the research aircraft. Researchers and pilots onboard worked with satellite information from the ground to find regions of high ice water content within the convective systems.	

2015 08 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/1JYVSW1Hydw">https://youtu.be/1JYVSW1Hydw</a>	Wings Over Louisiana NASA Observes Southern Subsidence	This short video highlights the ongoing observations a team of NASA scientists and engineers are making along the coast of Louisiana. Using a JPL developed instrument known as Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR), the team collects data 1-3 times per year to closely monitor ground subsidence and the health of the coastal wetlands. The collected data can potentially be used by federal and local officials in future civic and disaster planning. The research is particularly important to the City of New Orleans and its surrounding communities as they seek to protect their homes, businesses, and way of life from future disaster risks including sinkholes and floods caused by storm surges.	<a href="#">Transcript</a> <a href="#">Link</a>
2015 08 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/6KCq43ANfog">https://youtu.be/6KCq43ANfog</a>	Wings Over Louisiana NASA Observes Southern Subsidence (Extended Cut)	This 8-minute, 7-second video highlights the ongoing observations a team of NASA scientists and engineers are making along the coast of Louisiana. Using a JPL-developed instrument known as Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR), the team collects data 1-3 times per year to closely monitor ground subsidence and the health of the coastal wetlands. The collected data can potentially be used by federal and local officials in future civic and disaster planning. The research is particularly important to the City of New Orleans and its surrounding communities as they seek to protect their homes, businesses, and way of life from future disaster risks including sinkholes and floods caused by storm surges.  The UAVSAR is attached to the under belly pod of NASA's C-20A which is operated by Armstrong Flight Research Center.  This extended version includes commentary from members of the New Orleans community on their experiences during the 2005 Hurricane Katrina disaster.	<a href="#">0</a>
2015 08 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ATs8zhuhucw">https://youtu.be/ATs8zhuhucw</a>	NASA Armstrong PRANDTL-D Interns, Summer 2015	A group of NASA interns from different colleges across the nation came together during Summer 2015 with one goal: the successful flight test of PRANDTL-2. This student-produced video details the students' journey from fabrication to flight test of the PRANDTL-2 subscale aircraft. The students also worked on preparing the successor aircraft, PRANDTL-3, for flight tests later this year.	<a href="#">Transcript</a> <a href="#">Link</a>

2015 08 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/S2i5n4xkcvY">https://youtu.be/S2i5n4xkcvY</a>	SOFIA Southern Deployment Instrument Change	<p>This 4-minute, 7-second video shows the Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft's deployment to Christchurch, New Zealand, in July 2015. Four instruments were used to study celestial objects in the southern skies: the First Light Infrared Test Experiment CAMera (FLITECAM) and High-speed Imaging Photometer for Occultations (HIPO) were used to study the dwarf planet Pluto as it passed in front of a distant star on June 29. This video shows the FLITECAM and HIPO instrument combination being removed after the June 29 flight and replaced by the Faint Object InfraRed CAMera for the SOFIA Telescope (FORCAST) for additional science missions.</p> <p>The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2015 08 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/H7Olx8NQrg">https://youtu.be/H7Olx8NQrg</a>	Career Profile- Subscale UAS engineer pilot Robert Red Jensen- Operations Engineering Branch	<p>Robert "Red" Jensen is an operations engineer and pilot for subscale aircraft here at NASA's Armstrong Flight Research Center. As part fabricator, engineer, and integrator, Red tests subscale models of aircraft and ensures they are safe, capable of flight, and ready to support the Center's needs.</p> <p>Operations engineers are key leaders from technical concept to flight to ensure flight safety and mission success. This 10-minute, 2-second video highlights Red's responsibilities and daily activities as well as some of the projects and missions he is currently working on.</p>	<a href="#">0</a>
2015 07 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jzXsg8Fnags">https://youtu.be/jzXsg8Fnags</a>	SOFIA Captures Pluto Occultation	<p>It is no easy task to capture the shadow of Pluto as it travels across the surface of Earth at more than 53,000 mph—but that is exactly what NASA scientists and flight crew did on the night of June 29, 2015. In this 4-minute, 55-second video, the Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft's infrared telescope successfully observed the dwarf planet as it passed in front of a distant star. This event, known as an occultation, allowed scientific analysis of Pluto and its atmosphere by flying SOFIA at the right moment to an exact location where Pluto's shadow fell on Earth. This 4-minute, 55-second video shows the careful planning and real-time adaption of the observatory's flight path leading up to observation, and highlights the data's contributions to the New Horizons mission.</p> <p>SOFIA is a joint project of NASA and the German Aerospace Center (DLR). The aircraft is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA. NASA's Ames Research Center in Moffett Field, CA is home to the SOFIA Science Center that is managed by NASA in cooperation with the Universities Space Research Association headquartered in Columbia, MD, and the German SOFIA Institute at the University of Stuttgart.</p> <p>For more information on SOFIA visit: <a href="http://www.nasa.gov/sofia">http://www.nasa.gov/sofia</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2015 07 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/CdULw4-j_o">https://youtu.be/CdULw4-j_o</a>	Fiber Optics Sensing System A New Technology for Measurement	A research team at NASA's Armstrong Flight Research Center has developed a revolutionary technology called Fiber Optics Sensing System or FOSS, a system that provides real-time information on structure strain, shape, temperature, and other data used by designers.	<a href="#">Transcript</a> <a href="#">Link</a>
				This 6-minute, 58-second video shows the technology's current uses in aircraft research and design, as well as highlighting its potential applications beyond the aerospace industry.	
				For more information on FOSS visit:	
				<a href="http://www.nasa.gov/offices/ipp/centers/dfrc/technology/Fiber-Optic-Sensing-Suite.html">http://www.nasa.gov/offices/ipp/centers/dfrc/technology/Fiber-Optic-Sensing-Suite.html</a>	
2015 07 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/WlvYxdG1ovc">https://youtu.be/WlvYxdG1ovc</a>	Foam Fire- Suppression System Initial Test	NASA Armstrong Flight Research Center recently upgraded the foam fire suppression system for our aircraft support hangar. The safety system uses high expansion foam, which contains less water and chemicals making it more environmentally friendly. The foam is used to help control damage in the event of a fire and prevent the loss of any aircraft.	<a href="#">Transcript</a> <a href="#">Link</a>
				This 2-minute, 15-second video shows the new system being tested in the empty hangar to ensure that the consistency of the foam is correct and that it disperses quickly and evenly enough to suffocate a fire.	
2015 07 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KgWFS33oH1Y">https://youtu.be/KgWFS33oH1Y</a>	Chasing Polar Winds	<a href="http://www.nasa.gov/centers/armstrong/news/NewsReleases/2015/15-08.html">http://www.nasa.gov/centers/armstrong/news/NewsReleases/2015/15-08.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
				<a href="#">NASA's DC-8 recently completed an airborne mission in May 2015 focused on studying wind fields in the Arctic region. The mission, based from Keflavik, Iceland, aimed to provide wind data to preexisting weather models and to collect pre-launch calibration and validation data in support of the European Space Agency's (ESA) Atmospheric Dynamics Mission Aeolus satellite, or ADM-Aeolus.</a>	
				<a href="#">NASA researchers collect and study data from space, air, land and sea to tackle challenges facing the world today, including improved environmental prediction and natural hazard and climate change preparedness. NASA develops new ways to observe and study Earth's interconnected natural systems with long-term data records. The agency freely shares this unique knowledge and works with institutions around the world to gain new insights into how our planet is changing.</a>	
				-	
				<a href="#">For more information about NASA's Airborne Science Program, visit:</a>	
				-	
				<a href="http://airbornescience.nasa.gov">http://airbornescience.nasa.gov</a>	

2015 07 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aRr4o6v4r9M">https://youtu.be/aRr4o6v4r9M</a>	SOFIA Instrument Change in Christchurch	In this 3-minute, 52-second video, the Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft's science instrument was changed in Christchurch, New Zealand on June 26, 2015. SOFIA has seven different science instruments that can be used during observations, but this is the first instrument swap performed while the observatory is in Christchurch. SOFIA successfully observed Pluto as it passed in front of a star (called an occultation) on June 29, 2015.	<a href="#">Transcript Link</a>
				The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.	
				<a href="http://go.nasa.gov/1loxBLo">http://go.nasa.gov/1loxBLo</a>	
				More about SOFIA's instruments: <a href="http://go.nasa.gov/1KocDwq">http://go.nasa.gov/1KocDwq</a>	
2015 06 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/hXlee cp8oU">https://youtu.be/hXlee cp8oU</a>	SOFIA Southern Deployment 2015	In this 6-minute, 41-second video, NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft departed from its base operations in Palmdale, CA on June 12 and ferried to Christchurch, New Zealand to complete a five-week mission to study celestial objects that are better observed from the Southern Hemisphere. This video shows highlights of the various science objectives the team expects to complete, including observing an occultation of the dwarf planet Pluto on June 29.	<a href="#">Transcript Link</a>
				SOFIA is based at NASA Armstrong Flight Research Center's Hangar 703 in Palmdale, CA. NASA Ames Research Center in Moffett Field, CA manages SOFIA's science and mission operations in cooperation with the Universities Space Research Association (USRA; Columbia, MD) and the German SOFIA Institute (DSI; University of Stuttgart).	
2015 06 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tHyhbiHvQos">https://youtu.be/tHyhbiHvQos</a>	NASA Armstrong Airborne Science Mission Directorate	NASA's Armstrong Flight Research Center operates specialized aircraft to support environmental and Earth science missions under the Airborne Science Program of the agency's Science Mission Directorate. NASA's airborne missions address some of the critical challenges facing our planet today and in the future: climate change, sea level rise, freshwater resources, and extreme weather events.	<a href="#">Transcript Link</a>

2015 06 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7gXhCe1DwVg">https://youtu.be/7gXhCe1DwVg</a>	NASA Celebrates 50 Years of Space Suits	50 years ago, Ed White became the first American to walk in space. NASA used the technology from pressure suits worn for high-altitude flights to perfect the space suit.	<a href="#">Transcript Link</a>
2015 05 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Wqo8DIKcYtk">https://youtu.be/Wqo8DIKcYtk</a>	NASAs F-15 takes a pit stop to fuel up at the gas station in the sky	NASA pilot Jim Less and videographer Lori Losey refuel their F-15D #897 aircraft from a KC-135 refueling tanker. NASA is supporting the Edwards Air Force Base F-15 program with safety and video chase expertise.	<a href="#">0</a>
2015 05 15	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SG9lk7zclU4">https://youtu.be/SG9lk7zclU4</a>	Career Profile Flight Operations Engineer Robert Rivera	Operations engineers at NASA's Armstrong Flight Research Center help advance science, technology, aeronautics, and space exploration by managing operational aspects of a flight research project. They are the governing authority on airworthiness related to the modification, operation, or maintenance of specialized research or support aircraft so those aircraft can be flown safely without jeopardizing the pilots, persons on the ground, or the flight test project.	<a href="#">Transcript Link</a>
				With extensive aircraft modifications often required to support new research and technology development efforts, operations engineers are key leaders from technical concept to flight to ensure flight safety and mission success. Other responsibilities of an operations engineer include configuration management, performing systems design and integration, system safety analysis, coordinating flight readiness activities, and providing real-time flight support.	
				This 8-minute, 54-second video highlights the responsibilities and daily activities of NASA Armstrong operations engineer Robert Rivera during the preparation and execution of the Global Hawk airborne missions under NASA's Science Mission Directorate.	

2015 05 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jvcnx153S2s">https://youtu.be/jvcnx153S2s</a>	College Student Teams Design Mars Rovers	Armstrong's Education Office hosted 41 students from California, Washington, and Oregon in a team competition to design a rover for a mission to Mars.	<a href="#">Transcript Link</a>
				Funded by NASA's Minority University Research and Education Program (MUREP), the National Community College Aerospace Scholars program offers current Science, Technology, Engineering, and Math (STEM) students the opportunity to participate on exploring engineering by participating in hands-on experiences.	
				Duration: 4 minutes, 54 seconds.	
				<a href="http://ncas.aerospacescholars.org/">http://ncas.aerospacescholars.org/</a>	
				<a href="http://www.nasa.gov/centers/armstrong/home/index.html">http://www.nasa.gov/centers/armstrong/home/index.html</a>	
2015 04 30	NASA Armstrong Flight Research Center	<a href="https://youtu.be/z-Wdii8-jd8">https://youtu.be/z-Wdii8-jd8</a>	Exploring Electric Propulsion	LEAPTech (Leading Edge Asynchronous Propeller Technology) is a NASA Team Seedling Award under the Convergent Aeronautics Project of ARMD. The team is made up of LaRC (lead design), AFRC (lead integration), ESAero (Data Acquisition and Instrumentation) and Joby Aviation (Truck Design/Fabrication, wing design/fabrication, motor design and system power). LEAPTech is hoping to show distributed electric propulsion airframe integration benefits that have a Lift Coefficient of 5. With the leadership and requirements led by LaRC and AFRC , Joby Aviation and ESAero did all the hands on labor, safety reviews and initial check-out of LEAPTech. This is a great example of how the agility and flexibility of small businesses help NASA to quickly and aggressively building things.	<a href="#">Transcript Link</a>
				<a href="http://www.nasa.gov/centers/armstrong/Features/leaptech.html">http://www.nasa.gov/centers/armstrong/Features/leaptech.html</a>	
2015 04 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZC_Dif5SSmM">https://youtu.be/ZC_Dif5SSmM</a>	Rise and Shine, F-15B Twin-Engine Afterburner Run	<a href="http://www.nasa.gov/centers/armstrong/news/FactSheets/FS-055-DFRC.html">http://www.nasa.gov/centers/armstrong/news/FactSheets/FS-055-DFRC.html</a>  <a href="#">At NASA Armstrong we are always innovating. We recently installed a high-power thrust stand to test the engines on our F-15 fleet. At 60,000 pounds, it is currently the highest rated hold back assembly at Edwards Air Force Base. This video shows the F-15B performing a sunrise twin-engine afterburner run at the high-power thrust stand.</a>	<a href="#">Transcript Link</a>

2015 04 28 NASA Armstrong Flight Research Center <https://youtu.be/03QGp-qJQ6HQ> 2015 German Astronomy Ambassadors fly on SOFIA In this 2-minute, 59-second video, see inside a Stratospheric Observatory for Infrared Astronomy (SOFIA) aircraft flight with four German educators on board as Airborne Astronomy Ambassadors (AAA). These educators will use their flight experience to connect their students with SOFIA science, and inspire them to pursue careers in Science, Technology, Engineering, and Math (STEM). [Transcript Link](#)

The SOFIA aircraft, a 747SP, is operated by NASA's Armstrong Flight Research Center and based at Hangar 703 in Palmdale, CA.

2015 03 19 NASA Armstrong Flight Research Center <https://youtu.be/FghllnD4K1U> One Year as the Neil A. Armstrong Flight Research Center House Resolution H.R. 667 / Public Law 113-75 was implemented on March 1, 2014, naming the Dryden Flight Research Center as the NASA Neil A. Armstrong Flight Research Center. [Transcript Link](#)

Neil Armstrong flew as an NACA/NASA Research Pilot in California from 1955-1962. Armstrong was one of the first three NASA pilots to fly the X-15. On July 20, 1969, he piloted the Lunar Module "Eagle" to a Moon landing and became the first person ever to step on the surface of another planetary body, a moment remembered by many as the crowning achievement of his career. "That's one small step for (a) man, one giant leap for mankind."

Although today Armstrong is best known for his role as a NASA astronaut, in this homage, his colleagues appreciate him for his excellence as an engineer, test pilot, and for his personal life-long commitment to education.

Duration: 58 seconds.

2015 03 06 NASA Armstrong Flight Research Center <https://youtu.be/UKBPxRAGMBA> NACA – NASA 1915-2015 We Fly, We Explore, We Measure, We Reveal, We Discover

On March 3, 1915, Congress established the National Advisory Committee for Aeronautics (NACA) to "direct and conduct research and experimentation in aeronautics, with a view to their practical solution."

In 1946 at Muroc, California the NACA established a facility known as the NACA High-Speed Flight Research Station, now known as the NASA Neil A. Armstrong Flight Research Center, to conduct flight research and validate the technologies of high speed flight, including the Collier Trophy winning supersonic X-1 and hypersonic X-15 rocket planes.

Today NASA's Armstrong Flight Research Center at Edwards, California is helping advance NASA's missions of aeronautics research, Earth and space science, and aerospace technology. In 2014 the Center was named for Neil A. Armstrong, an NACA and NASA research test pilot from 1955 to 1962 who went on to command the historic Apollo 11 mission. It is home to the Hugh L. Dryden Aeronautical Test Range and serves as NASA's center of excellence for atmospheric flight research.

Topics include:

Celebrating a New Name: Armstrong Flight Research Center  
High-Speed testbeds: quieter supersonic flight studies: F-15, F-18  
Advanced Flight Control Software: increased flight safety: F-18 853  
New UAV Technologies: simulations & flight tests: Ikhana

2015 02 24 NASA Armstrong Flight Research Center [https://youtu.be/7sALW8qa8\\_o](https://youtu.be/7sALW8qa8_o) Miniature Aces NASA's Dale Reed Flight Research Laboratory

This 6-minute, 39-second video uncovers the workings, tools, and rationale of the scaled aircraft lab at NASA's Armstrong Flight Research Center on Edwards Air Force Base, CA.

Watch commercial-off-the-shelf aircraft, one-of-a-kind designs, powered aircraft, and gliders take-off, fly, and land. The chief pilot and designer of the lab explains how and why they do what they do.

[Q](#)

[Transcript Link](#)

2015 02 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MNvvFKFaKs4">https://youtu.be/MNvvFKFaKs4</a>	Armstrong Shuttle Mate- Demate Device dismantle time- lapse	NASA Armstrong Flight Research Center, formerly Dryden, on Edwards Air Force Base spent nearly three months demolishing its iconic space shuttle Mate-Demate Device (MDD), one of the center's last vestiges of the shuttle program that ended in 2011. NASA transitioned to a parallel path for human spaceflight exploration -- U.S. commercial companies providing access to low-Earth orbit and NASA preparing deep space exploration missions to an asteroid and Mars.  The large, gantry-like MDD structure was used for servicing the space shuttles after they landed at Edwards Air Force Base, lifting and placing them on NASA's modified Boeing 747 Shuttle Carrier Aircraft for their ferry flights back to agency's Kennedy Space Center in Florida. Constructed in 1976 at a cost of \$1.7 million, the MDD was first used in 1977 for the prototype shuttle orbiter Enterprise's Approach and Landing Tests. It was last used for turnaround operations of the shuttle Discovery following its STS-128 mission that landed at Edwards in 2009.	<a href="#">Transcript</a> <a href="#">Link</a>
2015 02 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-GMg536L4PU">https://youtu.be/-GMg536L4PU</a>	Flow Visualization Through The Years	This 6-minute, 32-second video takes a look at the evolution of various ways NASA has observed flow visualization in aircraft structures over the years.  Whether in the lab or flying high over the Mojave Desert, capturing these flow visuals is important for the development of future aeronautical concepts and designs.	<a href="#">Transcript</a> <a href="#">Link</a>
2014 12 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/VdX19bsc-pQ">https://youtu.be/VdX19bsc-pQ</a>	NASA Armstrong Flight Research Center 2014 Discovering the Unexpected	This 6-minute, 57-second video highlights some of the major research projects and science missions that occurred at NASA's Armstrong Flight Research Center in 2014.	<a href="#">0</a>

2014 12 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gymIgNzs1sA">https://youtu.be/gymIgNzs1sA</a>	Ikhana NASA Eyes in the Sky	This 3-minute, 8-second video shows how the Ikhana unmanned aircraft system (UAS) played a huge role in providing live video coverage on December 5, 2014, of NASA's Orion spacecraft splashdown and recovery.  Based at NASA's Armstrong Flight Research Center in California, the Ikhana, which is flown by human pilots in a ground station, is a flying testbed also used for NASA earth science and aeronautics research.	<a href="#">Transcript</a> <a href="#">Link</a>
2014 12 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ezF4g0rK558">https://youtu.be/ezF4g0rK558</a>	NASA Armstrong and JPL team up to monitor Louisiana wetlands	NASA's C-20A science research aircraft carries a specialized radar system developed by NASA's Jet Propulsion Laboratory in Pasadena, California. The Uninhabited Aerial Vehicle Synthetic Aperture Radar, located in a pod attached to the belly of the aircraft, collects data showing slight changes in Earth's surface. The aircraft, using a NASA-developed Platform Precision Autopilot, flies the same path over southeastern Louisiana several times each year to monitor the levees and look for subsidence in wetlands. NASA provides the results to agencies that monitor and maintain the critical flood-preventing infrastructure and levees in the New Orleans area.	<a href="#">Transcript</a> <a href="#">Link</a>
2014 12 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MXhj_PmhP4">https://youtu.be/MXhj_PmhP4</a>	NASA Begins Flight Testing of Shape-Shifting Wings	<a href="http://www.nasa.gov/centers/armstrong/research/ACTE/#.VH4sQLY-IZ0">http://www.nasa.gov/centers/armstrong/research/ACTE/#.VH4sQLY-IZ0</a>  <a href="#">NASA's green aviation project, together with the Air Force Research Laboratory (AFRL) and FlexSys, Inc, is one step closer to demonstrating technology that could make future airliners quieter and more fuel-efficient with the successful flight test of a wing surface that can change shape in flight. The Adaptive Compliant Trailing Edge (ACTE) is a direct result of 20 years of collaboration between AFRL and FlexSys and the ongoing flight tests will determine if flexible trailing-edge wing flaps can both improve aerodynamic efficiency and reduce airport-area noise generated during takeoffs and landings. In this joint effort, conventional hinged flaps on a modified Gulfstream III business aircraft were replaced with FlexSys' advanced, shape changing flaps that form continuous bendable and twistable surfaces. The first ACTE flight was successfully completed on November 6 at NASA's Armstrong Flight Research Center, and was followed by additional successful flights. The testing will continue over the next several months.</a>	<a href="#">Transcript</a> <a href="#">Link</a>

2014 11 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/DTuUzFxS_zg">https://youtu.be/DTuUzFxS_zg</a>	NASA Armstrong's Flight Loads Laboratory 50th Anniversary	<p>In this 8-minute, 6-second video, NASA's Armstrong Flight Research Center commemorated the 50th anniversary of its Flight Loads Laboratory. Over its accomplished history, the Flight Loads Laboratory has sought to understand everything from sensors measuring flight loads to understanding the effect of flight loads (static, dynamic, and thermal) on a variety of flight vehicles. Some of those flight vehicles included everything from conventional aircraft to high-speed aircraft like the SR-71 and YF-12 to re-entry vehicles like the X-37 space plane.</p> <p>The lab has also investigated the structural performance of a wide range of materials including conventional aircraft materials to exotic materials like metal matrix composites, carbon-carbon, and shape memory alloys.</p>	<a href="#">Transcript Link</a>	
2014 11 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/kVSjjHPIIRU">https://youtu.be/kVSjjHPIIRU</a>	NASA is With You When You Fly	<p>Aviation touches us. Even if you didn't fly today, something you needed did. Did you know that NASA-developed technology is on board every U.S. commercial aircraft and in every U.S. control tower? That's why we like to say "NASA's with you when you fly."</p>	<a href="#">Transcript Link</a>	
2014 11 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QWMmO7E99dM">https://youtu.be/QWMmO7E99dM</a>	Career Profile Flight Operations Engineer Matthew Berry	<p>Operations engineers at NASA's Armstrong Flight Research Center help advance science, technology, aeronautics, and space exploration by managing operational aspects of a flight research project. They are the governing authority on airworthiness related to the modification, operation, or maintenance of specialized research or support aircraft so those aircraft can be flown safely without jeopardizing the pilots, persons on the ground, or the flight test project.</p> <p>With extensive aircraft modifications often required to support new research and technology development efforts, operations engineers are key leaders from technical concept to flight to ensure flight safety and mission success. Other responsibilities of an operations engineer include configuration management, performing systems design and integration, system safety analysis, coordinating flight readiness activities, and providing real-time flight support.</p> <p>This 8-minute, 9-second video highlights the responsibilities and daily activities of NASA Armstrong operations engineer Matthew Berry during the preparation and execution of flight tests in support of aeronautics research.</p>	<a href="#">Transcript Link</a>	
				<p><a href="http://www.nasa.gov/centers/armstrong/home/">http://www.nasa.gov/centers/armstrong/home/</a></p>		
				<p><a href="http://www.nasa.gov/">http://www.nasa.gov/</a></p>		

2014 10 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/MM33ORifH84">https://youtu.be/MM33ORifH84</a>	Career Profile Flight Operations Engineer Brian Griffin	Operations engineers at NASA's Armstrong Flight Research Center help advance science, technology, aeronautics, and space exploration by managing operational aspects of a flight research project. They are the governing authority on airworthiness related to the modification, operation, or maintenance of specialized research or support aircraft so those aircraft can be flown safely without jeopardizing the pilots, persons on the ground, or the flight test project.	<a href="#">Transcript Link</a>
				With extensive aircraft modifications often required to support new research and technology development efforts, operations engineers are key leaders from technical concept to flight to ensure flight safety and mission success. Other responsibilities of an operations engineer include configuration management, performing systems design and integration, system safety analysis, coordinating flight readiness activities, and providing real-time flight support.	
				This 7-minute, 42-second video highlights the responsibilities and daily activities of NASA Armstrong operations engineer Brian Griffin during the preparation and execution of flight tests in support of aeronautics research.	
				<a href="http://www.nasa.gov/centers/armstrong/home/">http://www.nasa.gov/centers/armstrong/home/</a>	
				<a href="http://www.nasa.gov/">http://www.nasa.gov/</a>	
2014 09 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/QY2KTx8HxK8">https://youtu.be/QY2KTx8HxK8</a>	Educators Fly On Board SOFIA with the GREAT Spectrometer	In this 6-minute, 27-second video, Michael Maccarone and Elizabeth Rosenberger from Avenues: The World School in New York City, along with Margaret "Missy" Holzer, Chatham High School, Somerset, NJ, and Theresa Roelofsen Moody, New Jersey Astronomy Center at Raritan Valley Community College, High Bridge, NJ, are among the twelve, two-person teams who were competitively selected for NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) Airborne Astronomy Ambassadors (AAA) program in 2014. After their flight opportunities, Airborne Astronomy Ambassadors take what they learn back to their classrooms and into their communities to promote science literacy.	<a href="#">Transcript Link</a>
				This group of educators flew on board SOFIA on May 14 when the observatory was looking into space using the German Receiver for Astronomy at Terahertz Frequencies (GREAT), a spectrometer that studies infrared objects at wavelengths between 60 and 240 microns. Follow along to see what the educators learn while on board the observatory.	
				SOFIA is a joint project of NASA and the German Aerospace Center (DLR). The observatory is managed from, and is based at the Armstrong Flight Research Center's Hangar 703 facility in Palmdale, CA. NASA Ames Research Center manages the SOFIA science and mission operations in cooperation with the Universities Space Research Association (USRA) in Columbia, MD, and the German SOFIA Institute (DSI) at the University of Stuttgart.	

2014 09 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/o1H68hJekO4">https://youtu.be/o1H68hJekO4</a>	Illinois and Ohio Educators Fly on NASA Astronomy Mission	This 9-minute, 19-second video shows the twelve two-person teams were competitively selected in 2014 for NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) Airborne Astronomy Ambassadors (AAA) program. This year's ambassadors represent teachers from 10 states. After their flight opportunities, Airborne Astronomy Ambassadors will take what they learn back to their classrooms and into their communities to promote science literacy.	<a href="#">Transcript Link</a>
<p>For the May 5, 2014 flight, four Airborne Astronomy Ambassadors were on board. The two teams of educators for this flight included Heidi Steinbrink from Oakwood Senior High School, Dayton, OH; Tom Jenkins from the Dayton Regional STEM Center and Greenon Local Schools, Enon, OH; Marcella Linahan, Carmel Catholic High School, Mundelein, IL; and Lynne Zielinski from the National Space Society, Long Grove, IL. In addition to working with astronomers on the flight, the Airborne Astronomy Ambassadors conducted their own astronomy and physics experiments.</p>					
<p>SOFIA is a joint project of NASA and the German Aerospace Center (DLR). The flying observatory is managed from, and is based at the Armstrong Flight Research Center's Hangar 703 facility in Palmdale, CA. NASA Ames Research Center manages the SOFIA science and mission operations in cooperation with the Universities Space Research Association (USRA) in Columbia, MD, and the German SOFIA Institute (DSI) at the University of Stuttgart</p>					
<p><a href="http://www.nasa.gov/centers/armstrong/home/">www.nasa.gov/centers/armstrong/home/</a></p>					
2014 09 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3dzDzCojhSA">https://youtu.be/3dzDzCojhSA</a>	NASA Radar Data Reveals Fault Movement from Napa Quake	An airborne radar survey in the Napa Valley area of Northern California conducted by NASA scientists has revealed clear indications of fault-line displacements near the epicenter of the 6.0-magnitude Napa Valley earthquake that occurred Aug. 24, 2014. Results from a sophisticated radar system developed by NASA's Jet Propulsion Laboratory in Pasadena, California, showed distinct lines that reflect slippage along multiple strands of the fault when compared with radar imagery taken over the area three months earlier.	<a href="#">Transcript Link</a>
<p><a href="http://www.nasa.gov/centers/armstrong/home/">http://www.nasa.gov/centers/armstrong/home/</a></p>					
<p><a href="http://www.jpl.nasa.gov/">http://www.jpl.nasa.gov/</a></p>					
2014 08 26	NASA Armstrong Flight Research Center	<a href="https://youtu.be/pXrmJhSptck">https://youtu.be/pXrmJhSptck</a>	NASA'S Armstrong Flight Research Center Reaching For New Heights	The Armstrong Flight Research Center, NASA's Center of Excellence for atmospheric flight, conducts research to advance science, technology, aeronautics and space exploration, enhancing knowledge, education, innovation, economic vitality, and stewardship of Earth. This video highlights some of the center's current efforts in support of the agency's strategic goals in Earth science, space exploration, next-generation aviation systems and technology development.	<a href="#">Transcript Link</a>
<p><a href="http://www.nasa.gov/centers/armstrong/home/">http://www.nasa.gov/centers/armstrong/home/</a></p>					

2014 08 21 NASA Armstrong Flight Research Center <https://youtu.be/x1E3xpePbmA> X-31 Breaking the Chain Lessons Learned By any measure, the X-31 was a highly successful flight research program at NASA's Dryden Flight Research Center, now the Armstrong Flight Research Center. It regularly flew several flights a day, accumulating over 550 flights during the course of the program, with a superlative safety record. And yet, on Jan. 19, 1995, on the very last scheduled flight of the X-31 ship No. 1, disaster struck.

[Transcript Link](#)

Each mishap has it's own set of circumstances and it's own sequence of events. But those who study mishaps find similar issues: communications, complacency, unwarranted assumptions, human frailties....just like a chain. You make a chain -- a chain of events -- when you have any of these accidents. Any link of the chain, if broken, would prevent an accident.

The X-31 flight test team was the "A" team -- the best people, from every discipline -- from every organization. But they lost an airplane. If it can happen to the best team, it can happen to any team.

Created: 2005 Run time: 38 minutes 45 seconds

Produced by NASA Armstrong TV Services

2014 07 31 NASA Armstrong Flight Research Center <https://youtu.be/OB2XyutVrxU> SOFIA Observatory Hosts Oregon, Washington Educators

Kim Abegglen and Anna-Melissa Lyons from Hockinson Middle School, Vancouver, Washington, Robert Black from North Medford High School and Dave Bloomsness from the Southern Oregon Skywatchers, Medford, Oregon, flew on board NASA's Stratospheric observatory for Infrared Astronomy (SOFIA) in May 2014. The educators observed SOFIA scientists studying star forming regions and a unique stellar merger during the flight. Follow along as they see infrared astronomy in action.

[Transcript Link](#)

In 2014, 12 two-person teams were competitively selected for SOFIA's Airborne Astronomy Ambassadors program, representing teachers from 10 states. After their flight opportunities, Airborne Astronomy Ambassadors will take what they learn back to their classrooms and into their communities to promote science literacy.

[www.nasa.gov/centers/armstrong/home/](http://www.nasa.gov/centers/armstrong/home/)

[www.nasa.gov/centers/ames/home/](http://www.nasa.gov/centers/ames/home/)

<http://www.usra.edu/>

[www.dlr.de/en/SOFIA](http://www.dlr.de/en/SOFIA)

[www.dsi.uni-stuttgart.de/](http://www.dsi.uni-stuttgart.de/)

2014 07 16 NASA <https://youtu.be/091ezcY-mkU> LLRV Testing Contributed to Apollo 11's Success NASA marks the 45th anniversary of the first moon landing this month. The world watched in awe as astronauts Neil Armstrong and Buzz Aldrin set their lunar module Eagle down in the Sea of Tranquility on July 20, 1969, while crewmate Michael Collins orbited above in the command module Columbia. [Transcript](#) [Link](#)

This video, featuring comments from the late Apollo 11 astronaut and research pilot Neil Armstrong, explores the contributions of the Lunar Landing Research Vehicle (LLRV) development and flight-testing at NASA's Flight Research Center, recently renamed in Armstrong's honor, to the Apollo moon-landing program.

As we reflect on the accomplishments of the Apollo program, NASA is preparing to make the next giant leap to venture even further into space. The new Space Launch System and the Orion spacecraft will enable astronauts to capture an asteroid and bring it into orbit around the moon, thus enabling scientific investigations of the origins of our solar system. Just as we solved and trained how to land on the moon, we are driven to explore the cosmos, to make America's "next giant leap" to send astronauts to Mars.

<http://www.nasa.gov/centers/armstrong/home/>

2014 07 10 NASA <https://youtu.be/ut2LwD1eO6I> Airborne Astronomy Ambassadors from Texas and Nebraska take flight on SOFIA Join Airborne Astronomy Ambassadors George Hademenos and Diane Watson from Richardson High School, Richardson, Texas, and Judi Little and LeeAnn Vaughan from Burke High School, Omaha, Nebraska, during a science flight on board The Stratospheric Observatory for Infrared Astronomy (SOFIA). In 2014, twelve two-person teams were competitively selected for SOFIA's Airborne Astronomy Ambassadors program representing teachers from 10 states. After their flight opportunities, Airborne Astronomy Ambassadors will take what they learn back to their classrooms and into their communities to promote science literacy. [0](#)

SOFIA is a joint project of NASA and the German Aerospace Center (DLR). The observatory is managed from, and the observatory is based at the Armstrong Flight Research Center's facility in Palmdale, California. NASA Ames Research Center manages the SOFIA science and mission operations in cooperation with the Universities Space Research Association (USRA) in Columbia, Md., and the German SOFIA Institute (DSI) at the University of Stuttgart.

[www.nasa.gov/centers/armstrong/home/](http://www.nasa.gov/centers/armstrong/home/)

[www.nasa.gov/centers/ames/home/](http://www.nasa.gov/centers/ames/home/)

<http://www.usra.edu/>

[www.dlr.de/en/SOFIA](http://www.dlr.de/en/SOFIA)

2014 07 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/8TnUSlwUluE">https://youtu.be/8TnUSlwUluE</a>	Retired NASA F A-18 Back on Display at 'The Hangar'	After a six-month absence, a retired NASA F/A-18A Hornet aircraft that served as an iconic landmark in front of "The Hangar" -- the Lancaster Municipal Stadium -- in Lancaster, Calif., for 17 years is back on its perch.  Sporting a fresh coat of paint, new logos and identification, the recently refurbished airframe was remounted on a new pylon June 24 by crews from NASA Armstrong Flight Research Center's ground-support and transportation services contractor, Kay and Associates, with assistance from a large crane.  The refurbished F/A-18 gives tribute to the late NASA research pilot and astronaut Gordon Fullerton -- "Gordo" to those who knew him -- whose name is inscribed on each side of the fuselage below the cockpit canopy frame.  The early-model aircraft was used for developmental testing by the Navy. It was then flown as a mission support aircraft by NASA's Dryden -- now Armstrong -- Flight Research Center from the mid-1980s to the early 1990s when it was retired.  Learn more at: <a href="http://1.usa.gov/1IW6tci">http://1.usa.gov/1IW6tci</a>	<a href="#">Transcript Link</a>
2014 07 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/o7UjEg5P2DU">https://youtu.be/o7UjEg5P2DU</a>	Independence Day	NASA's Armstrong Flight Research Center commemorates the anniversary of our nation's Declaration of Independence with a moving rendition of our national anthem, as sung by Kali Armstrong, granddaughter of the center's namesake, Neil A. Armstrong.  Ms. Armstrong, accompanied by guitarist Taylor Sullivan, sang the Star Spangled Banner to open the ceremony on May 13, 2014 that renamed the center for her grandfather, who served as a research pilot at the center before becoming a NASA astronaut and the first person to set foot on the moon during the historic Apollo 11 lunar mission in July 1969.  Produced by NASA Armstrong TV	<a href="#">Transcript Link</a>

2014 07 01 NASA Armstrong Flight Research Center <https://youtu.be/eGbgMkg8z9A> NASA's Armstrong Flight Research Center Advancing Technology and Science Through Flight

When you think of NASA, you probably think of space exploration. Aeronautics, the science of flight, is also an important piece of NASA's directive. NASA's Armstrong Flight Research Center has been on the cutting edge of aeronautical development in pursuit of our goal to advance technology and science through flight throughout the seven decades of its existence. Branching out from its roots in aeronautics research, the center today supports NASA's science, space exploration and technology development goals as well as its core work in aeronautics through a wide range of research projects and missions.

NASA Armstrong is working to solve the challenges that still exist in our nation's air transportation system, helping create safer, cleaner, and more effective travel for everyone through fuel-efficient flight planning, and the reduction of aircraft fuel consumption, emissions, and noise. The center is conducting an unprecedented array of airborne science missions that seek new knowledge and understanding of Earth. It supports new knowledge of our solar system and the universe beyond through its operation of the Stratospheric Observatory for Infrared Astronomy. And NASA Armstrong is helping to validate new flight technologies that have practical implications here on our planet and in space exploration.

This video presents an overview of NASA Armstrong, NASA's center of excellence for atmospheric flight research, flying what others only imagine --- yesterday, today and into the future .

2014 06 27 NASA Armstrong Flight Research Center [https://youtu.be/f\\_GZvygaEH4](https://youtu.be/f_GZvygaEH4) Masten's Xombie Flight Tests Astrobotic's Autonomous Landing System

This 1-minute, 3-second video shows how Astrobotic Technology's newly developed autonomous landing system was put to the test when it controlled Masten Space Systems' XA-0.1B Xombie suborbital technology demonstration rocket during a flight test at the Mojave Air and Space Port. Astrobotic's system was designed to avoid terrain hazards while safely landing a spacecraft at a specific location on a asteroid, moon, or planet.

The June 20, 2014 test funded by the Flight Opportunities program of NASA's Space Technology Mission Directorate saw the vertical-takeoff, vertical-landing Xombie ascend to about 853 feet in 25 seconds. Using cameras and an inertial measurement unit for navigation, the Astrobotic Autolanding System guided the vehicle to a precise landing.

2014 06 18 NASA Armstrong Flight Research Center [https://youtu.be/iNb\\_R6aU4z0](https://youtu.be/iNb_R6aU4z0) 3-D Printing at NASA's Armstrong Flight Research Center

NASA student intern Victor Ruiz demonstrates the uses and capabilities of the recently acquired high-resolution 3-D printer at NASA's Armstrong Flight Research Center. In the NASA Armstrong Subscale Aircraft Research Lab, the 3-D printer provides an efficient means for creating quality, low cost proof-of-concept parts for small-scale aircraft. Most parts are created in less than an hour, although that varies by complexity. Once the plastic prototypes are verified to meet the correct part specifications, the final product is made in NASA Armstrong machine shop

[Transcript Link](#)

2014 06 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/7Kog1d1tIIO">https://youtu.be/7Kog1d1tIIO</a>	AERO Institute Hosts World of Pressure Teacher Workshop	Teachers gathered at NASA Armstrong Flight Research Center's Educator Resource Center in Palmdale, California, recently for a NASA educators' workshop about atmospheric pressure. Armstrong education specialist Richard Chapleau conducted the "NASA and the World of Pressure" workshop and explained the difficulties of working with the effects of high and low pressure.	<a href="#">Transcript Link</a>
				Chapleau used a bell jar vacuum chamber to demonstrate pressure effects. He also presented content that described the Ideal Gas Law equation, followed by a hands-on activity where the teachers were able to replicate the gas law effects using syringes.	
				Aided by a high-altitude pressure suit worn by NASA ER-2 pilots, life-support expert Jim Sokolik demonstrated how pilots are equipped to survive at extreme altitudes.	
				<a href="http://www.nasa.gov/centers/armstrong/home/index.html">http://www.nasa.gov/centers/armstrong/home/index.html</a>	
				<a href="http://www.aeroi.org">www.aeroi.org</a>	
2014 06 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/SH_NlsDe3jE">https://youtu.be/SH_NlsDe3jE</a>	Structural Loads Tests Conducted for ACTE Flight Research on NASA G-III	Structural loads testing was conducted on a modified Gulfstream III aircraft that will be the test bed for the Adaptive Compliant Trailing Edge (ACTE) flight research project at NASA's Armstrong Flight Research Center at Edwards Air Force Base, CA.	<a href="#">0</a>
				The highly specialized loads testing in the Center's Flight Loads Laboratory involved applying known loads to the aircraft using a system of hydraulic actuators while accurately measuring the response of strain gauges bonded to the aircraft wing at precise locations. The tests were conducted with the G-III supported on three large inflated airbags instead of on its main landing gear to isolate the aircraft's center wing box structure from potential influence of the landing gear on the wing strain gauge data.	
				The loads tests in the laboratory provide the data from which engineers will derive wing load equations that will be used to convert strain gauge signals into actual wing-loading information, enabling project engineers to understand what structural loads and stresses the airplane will experience during the ACTE research flights.	
				The ACTE project involved flight validation of advanced, shape-changing composite flaps developed by FlexSys, Inc. that form continuous conformal surfaces in place of both of the G-III's conventional 19-foot-long aluminum flaps. A joint effort between NASA and the U.S. Air Force Research Laboratory, the ACTE project flight tested the advanced flexible trailing-edge wing flaps that have	

2014 06 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fVcSaki8d-4">https://youtu.be/fVcSaki8d-4</a>	HIAD Changing the way we explore other worlds	Slowing spacecraft as they descend into planetary bodies' atmospheres and then land safely on the surface has been crucial to NASA since spacecraft first lifted off Earth in the late 1950s. The Hypersonic Inflatable Aerodynamic Decelerator, or HIAD, is being developed by NASA's Langley Research Center to decelerate spacecraft from the hypersonic speeds at which they travel when in space as they enter planetary atmospheres.	<a href="#">Transcript Link</a>
				HIAD is an inflatable technology that resembles a giant cone of inner tubes similar to a child's stacking ring. A prototype version of the device recently underwent structural loads testing in the Flight Loads Laboratory at NASA's Armstrong Flight Research Center, Edwards, CA.	
				The 4-minute, 6-second video includes final compression and torsion buckle testing of the HIAD in NASA Armstrong's Flight Loads Lab and comments about the development and loads testing from project officials.	
				For more on the HIAD and its loads testing, visit:	
				<a href="http://www.nasa.gov/centers/armstrong/Features/HIAD_decelerator_system.html">http://www.nasa.gov/centers/armstrong/Features/HIAD_decelerator_system.html</a>	
				For more on the capabilities of NASA Armstrong's Flight Loads Lab, visit:	
2014 05 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/6mFuWbVu6c8">https://youtu.be/6mFuWbVu6c8</a>	NASA's Alternative Fuels Research Showcased at NASA Social Media Day	<a href="http://1.usa.gov/1icsmxD">http://1.usa.gov/1icsmxD</a> " <a href="http://1.usa.gov/1gRxQfz">http://1.usa.gov/1gRxQfz</a> " <a href="http://1.usa.gov/1gRxQfz">http://1.usa.gov/1gRxQfz</a> <a href="#">Briefings and tours highlighting NASA's alternative jet fuel research in the Alternative Fuel Effects on Contrails and Cruise Emissions (ACCESS II) flight experiment were the focus of a combination NASA Social and media day at NASA Armstrong Flight Research Center's facility in Palmdale, California.</a>  <a href="#">The event gave journalists and social media users an opportunity to learn more about scientific research being conducted on the effects of alternate fuels, including synthetic and biofuel formulations, on engine performance, emissions and aircraft-generated contrails at altitudes typically flown by commercial airliners.</a>	<a href="#">0</a>

2014 05 07	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nWJ9A2ehH7I">https://youtu.be/nWJ9A2ehH7I</a>	Retired NASA research test pilot Bill Dana dies	<a href="http://www.nasa.gov/centers/armstrong/news/NewsReleases/2014/14-15.html#.U2q8FCTFSxE">http://www.nasa.gov/centers/armstrong/news/NewsReleases/2014/14-15.html#.U2q8FCTFSxE</a>  <a href="#">One of the nation's most respected aerospace pioneers, former NASA research pilot and aeronautical engineer William Harvey Dana, has passed away. Dana died on May 6, 2014 after a lengthy illness. Dana's long and illustrious career at NASA's Armstrong Flight Research Center, formerly the Dryden Flight Research Center, spanned more than 48 years, during which Dana logged more than 8,000 hours in over 60 different aircraft ranging from helicopters and sailplanes to the hypersonic X-15. Several of the unique research aircraft he flew are displayed at the National Air and Space Museum in Washington, D.C.</a>  <a href="#">This video is an excerpt from his NASA Distinguished Service Medal presentation in 1997.</a>	<a href="#">Transcript Link</a>
2014 05 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/iO7LoN5Gy1s">https://youtu.be/iO7LoN5Gy1s</a>	Seeing Sound Teachers Learn the Science of Sound	<p>A group elementary, middle and high school teachers learned about the science of sound and how to communicate that science to their students in a practical way during a "Seeing Sound" workshop at the NASA Armstrong Educator Resource Center in Palmdale, Calif.</p> <p>Sponsored by the Office of Education at NASA's Armstrong Flight Research Center, the workshop showed the attendees how to use lesson plans and activities developed by NASA's Aeronautics Research Mission Directorate to communicate concepts that support the agency's emphasis on Science, Technology, Engineering and Mathematics curricula -- the STEM disciplines.</p> <p>The Seeing Sound activity involved use of readily available materials to build a simple waveform monitor that bounced a laser pointer beam off of a mirror glued to a balloon diaphragm stretched over the end of a tube. Vibrations from sounds going through the open end of the tube resulted in the laser pointer creating a visible waveform projected on a nearby wall or screen.</p> <p><a href="http://1.usa.gov/1rXGVvu">http://1.usa.gov/1rXGVvu</a></p> <p>Produced by NASA Armstrong TV/Video Services</p> <p><a href="http://www.nasa.gov/">http://www.nasa.gov/</a></p> <p><a href="http://www.nasa.gov/">http://www.nasa.gov/</a></p>	<a href="#">Transcript Link</a>
2014 04 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ClqiQ3CFyAQ">https://youtu.be/ClqiQ3CFyAQ</a>	NASA Armstrong Test Range Named in Honor of Hugh Dryden	<p>The aeronautical test range at NASA's Armstrong Flight Research Center was named in honor of the late Hugh L. Dryden in brief ceremonies on April 15, 2014. The dedication of the Dryden Aeronautical Test Range perpetuates the memory of Hugh Dryden, a brilliant aeronautical engineer and leader for whom the NASA field center owes its existence as a permanent aeronautical research facility. Following dedicatory remarks by NASA Armstrong center director David McBride and NASA associate administrator Robert Lightfoot, the ceremony concluded with the pair unveiling a portrait and a bust of Hugh Dryden.</p> <p>Learn more at: <a href="http://1.usa.gov/1ipKNC5">http://1.usa.gov/1ipKNC5</a></p>	<a href="#">Transcript Link</a>

2014 04 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/llsOVMchV2I">https://youtu.be/llsOVMchV2I</a>	Airborne Astronomy Ambassadors Begin Flights on SOFIA Observatory	The first group of educators in NASA's 2014 Airborne Astronomy Ambassadors program got a taste of astrophysics research first-hand during a flight aboard the Stratospheric Observatory for Infrared Astronomy (SOFIA). They were the first of 24 teachers and informal educators scheduled to fly aboard the flying telescope in 2014, paired with astronomers and scientists to observe first-hand how airborne infrared astronomy is conducted.	<a href="#">Transcript Link</a>
				Learn more at: <a href="http://1.usa.gov/1qf2eaU">http://1.usa.gov/1qf2eaU</a>	
				<a href="http://www.nasa.gov/centers/armstrong/home/index.html#UxUCHl7rIbl">http://www.nasa.gov/centers/armstrong/home/index.html#UxUCHl7rIbl</a>	
				<a href="http://www.sofia.usra.edu/">http://www.sofia.usra.edu/</a>	
2014 04 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/AAay08a-Lgc">https://youtu.be/AAay08a-Lgc</a>	NASA Has Major Presence at Los Angeles County Air Show	NASA's Armstrong Flight Research Center had a major presence at the recent Los Angeles County Air Show in Lancaster, Calif. A plethora of exhibits, demonstrations and displays about the agency's aeronautics research, airborne science and astrophysics missions and STEM education activities graced the center's exhibit tent along the flight line at Fox Airfield.	<a href="#">Transcript Link</a>
				One of NASA's high-altitude ER-2 Earth Resources science aircraft made a low-level flyover both days, while a NASA Armstrong F/A-18, a former Blue Angels aircraft, was part of NASA's ground exhibits.	
				The two-day show, headlined by the Navy's Blue Angels precision demonstration team, drew an estimated 110,000 spectators.	
				<a href="http://www.nasa.gov/">http://www.nasa.gov/</a>	
				<a href="http://www.nasa.gov/centers/armstrong/home/index.html">http://www.nasa.gov/centers/armstrong/home/index.html</a>	
				<a href="http://www.lacountyairshow.com/">http://www.lacountyairshow.com/</a>	

2014 03 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/g5z6fZKOtP4">https://youtu.be/g5z6fZKOtP4</a>	Inside NASA's SOFIA Airborne Astronomical Observatory	<p>As the world's largest flying observatory, NASA's Stratospheric Observatory for Infrared Astronomy, or SOFIA, is a unique space-science asset. SOFIA incorporates a 19-ton German-built telescope with an effective diameter of 2.5 meters in a highly modified Boeing 747SP aircraft that flies astronomical science missions at altitudes between 39,000 and 45,000 feet, above 99 percent of the infrared-blocking water vapor in the atmosphere. Capable of conducting observations in visible through far-infrared spectra from any part of the globe, SOFIA provides access to a spectral region not currently accessible by ground or space telescopes.</p> <p>A joint program of NASA and the German Aerospace Center DLR, the SOFIA observatory is based at NASA's Science and Aircraft Integration Facility in Palmdale, Calif., a satellite facility of the NASA Armstrong Flight Research Center. NASA's Ames Research Center manages the science and mission operations in cooperation with the Universities Space Research Association and the Deutsches SOFIA Institut.</p> <p>SOFIA's Airborne Astronomy Ambassadors program provides educators hands-on experience as they work with scientists during missions on the flying observatory.</p>	<a href="#">Transcript</a> <a href="#">Link</a>
2014 03 05	NASA Armstrong Flight Research Center	<a href="https://youtu.be/-d7oe-uj9Gc">https://youtu.be/-d7oe-uj9Gc</a>	NASA Armstrong Flight Research Center A Vision for the World of Flight	This fast-paced video highlights some of the flight research and other activities that occurred at NASA's Dryden Flight Research Center in 2013, and looks ahead to some of the major research projects and science missions that the center, newly renamed NASA's Armstrong Flight Research Center, is conducting in 2014.	<a href="#">0</a>
2014 03 03	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mzGKRYvy1dY">https://youtu.be/mzGKRYvy1dY</a>	German Airborne Astronomy Ambassadors fly aboard SOFIA Observatory	<p>Four German teachers flew aboard NASA's Stratospheric Observatory for Infrared Astronomy in February 2014 as part of the German Airborne Astronomy Ambassadors program. The flying observatory became a flying classroom for the night as the teachers worked alongside scientists from the German SOFIA Institute's GREAT spectrometer team. This first group of German educators took their experience back to their classrooms and communities to promote astronomical science literacy. NASA operates the SOFIA flying observatory in partnership with the German SOFIA Institute.</p> <p><a href="http://www.nasa.gov/centers/armstrong/home/index.html#.UxUCHl7rlbl">http://www.nasa.gov/centers/armstrong/home/index.html#.UxUCHl7rlbl</a></p> <p><a href="http://www.sofia.usra.edu/">http://www.sofia.usra.edu/</a></p>	<a href="#">Transcript</a> <a href="#">Link</a>

2014 01 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/24U39QRs1o">https://youtu.be/24U39QRs1o</a>	NASA Deploys ATTREX To Guam to Study Climate Change	NASA is deploying the uncrewed Global Hawk research aircraft to Guam for the Airborne Tropical Tropopause Experiment (ATTREX). The mission is studying changes in moisture and chemical composition of the upper atmosphere that can affect Earth's climate. Instruments onboard the Global Hawk will take measurements in the Pacific Ocean's tropical tropopause, a layer of the atmosphere between 55,000 and 65,000 feet above sea level.	<a href="#">Transcript</a> <a href="#">Link</a>	
				For more information about the ATTREX Mission, please visit: <a href="http://espo.nasa.gov/missions/attrex">http://espo.nasa.gov/missions/attrex</a> For more information about NASA Ames, please visit: <a href="http://www.nasa.gov/ames">http://www.nasa.gov/ames</a>		
2013 12 13	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Hr016wBFGpY">https://youtu.be/Hr016wBFGpY</a>	Proving Prandtl- With A Twist!	<a href="http://www.nasa.gov/centers/dryden/home/index.html#UqikYo0RBbl">http://www.nasa.gov/centers/dryden/home/index.html#UqikYo0RBbl</a>  <a href="#">A group of college aerospace engineering students in the 2012-2013 Aeronautics Academy at NASA's Dryden Flight Research Center have proven German aerodynamicist Ludwig Prandtl's theory on how to overcome one of the thorny problems of flight -- adverse yaw due to induced drag -- without relying on rudders or complicated computerized flight controls to accomplish it. This student-produced video details the students' research, using a student-built subscale flying-wing sailplane that proved that proverse yaw can be achieved just as birds achieve it -- through wingtip aerodynamics alone.</a>  <a href="#">Music: Deadmau5 - Strobe (Evan Duffy Piano Cover)</a>	<a href="#">Transcript</a> <a href="#">Link</a>	
2013 08 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/sm8p8rJM4B4">https://youtu.be/sm8p8rJM4B4</a>	Sierra Nevada's Dream Chaser Undergoes Captive-Carry Test	In this 3-minute, 38-second video, Sierra Nevada Corporation Space Systems conducted a captive-carry flight test of its Dream Chaser spacecraft engineering test vehicle Aug. 22, 2013, at NASA's Dryden (now Armstrong) Flight Research Center at Edwards, CA.  During the 2-hour test, a large Sikorsky S-64 Sky Crane helicopter operated by Erickson Air Crane picked up the Dream Chaser and flew it repeatedly through flight profiles it would take during planned free-flight approach and landing tests this fall at Edwards.  Sierra Nevada is one of three companies funded by NASA via the Commercial Crew Program's initiatives to develop a privately operated spacecraft capable of shuttling astronauts and limited amounts of supplies and experiments into low Earth orbit and to the International Space Station.	<a href="#">Transcript</a> <a href="#">Link</a>	
				Learn more at: <a href="http://www.nasa.gov/content/nasa-partner-snc-carries-out-captive-carry-test/">http://www.nasa.gov/content/nasa-partner-snc-carries-out-captive-carry-test/</a>		
				For more on NASA's Commercial Crew Program, visit: <a href="http://www.nasa.gov/commercialcrew">www.nasa.gov/commercialcrew</a>		

2013 08 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Hpvml6wXFE4">https://youtu.be/Hpvml6wXFE4</a>	Gordon Fullerton's Career in Review	This video highlights the life of NASA astronaut and research test pilot Gordon Fullerton, who compiled a distinguished flying career in air and space spanning more than 49 years with the U.S. Air Force and NASA. Fullerton served on the support crews for the last four Apollo moon missions, flew the approach and landing tests of the space shuttle, and soared into space on two space shuttle missions while in the NASA astronaut corps. He later served for 22 years as a research test pilot on a variety of high-profile projects at NASA's Dryden Flight Research Center at Edwards Air Force Base, Calif. Fullerton retired from NASA in late 2007, and died on Aug. 21, 2013, at the age of 76.	<a href="#">Transcript Link</a>
				Read more on Fullerton's life and career at:	
				"http://www.nasa.gov/centers/dryden/news/Biographies/Pilots/bd-dfrc-p004.html" <a href="http://www.nasa.gov/centers/dryden/news/Biographies/Pilots/bd-dfrc-p004.html">http://www.nasa.gov/centers/dryden/news/Biographies/Pilots/bd-dfrc-p004.html</a> .	
2013 07 30	NASA Armstrong Flight Research Center	<a href="https://youtu.be/mVGwenYn-bg">https://youtu.be/mVGwenYn-bg</a>	NASA G-III to Flight Test Shape- Changing Composite Flap	NASA Dryden (now Armstrong) Flight Research Center's Gulfstream III aerodynamics research test bed aircraft is undergoing modification to support the Adaptive Compliant Trailing Edge (ACTE) project, a joint effort between NASA and the U.S. Air Force Research Laboratory.	<a href="#">Transcript Link</a>
				Both of the G-III's conventional aluminum wing flaps were replaced with shape-changing composite flaps designed by FlexSys, Inc., that form continuous bendable surfaces. This 2-minute, 14-second video shows maneuvers flown to provide baseline data for comparison with data recorded after the flexible flaps were installed, a sample of a flexible flap being lab tested in a lab, and the G-III in NASA Dryden's Flight Loads Laboratory undergoing baseline structural loads testing.	
				For more information, click here: <a href="http://www.nasa.gov/centers/dryden/Features/G-III_undergoes_loads_testing.html#.UfIHLa8cZ1">http://www.nasa.gov/centers/dryden/Features/G-III_undergoes_loads_testing.html#.UfIHLa8cZ1</a>	
				<a href="http://www.nasa.gov/centers/dryden/research/ACTE/index.html">http://www.nasa.gov/centers/dryden/research/ACTE/index.html</a>	
2013 07 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/A0Mre_IYU2g">https://youtu.be/A0Mre_IYU2g</a>	Christchurch International Airport Personnel and Local Media Visit SOFIA	Dr. Eric Becklin, SOFIA chief science advisor, briefs airport personnel and media on the Stratospheric Observatory for Infrared Astronomy program and the reasons for infrared astronomy missions in the Southern Hemisphere.	<a href="#">0</a>

2013 07 29 NASA Armstrong Flight Research Center [https://youtu.be/Flp8RD\\_A5fLc](https://youtu.be/Flp8RD_A5fLc) SOFIA Team Prepares for Southern Hemisphere Science Flights SOFIA maintenance chief Daryl Townsend discusses how the team prepares the modified 747SP for science missions. The aircraft is flying from a base in Christchurch, New Zealand, for science investigations in the Southern Hemisphere. [Transcript Link](#)

2013 07 29 NASA Armstrong Flight Research Center <https://youtu.be/F87b13uiLi0> NASA's SOFIA Arrives in Christchurch, New Zealand, July 14, 2013 NASA's Stratospheric Observatory for Infrared Astronomy airborne observatory arrived at Christchurch International Airport, New Zealand, July 14 at 12:14 p.m. (New Zealand Standard Time) to investigate celestial objects visible in the sky over the Southern Hemisphere. [Transcript Link](#)

Clip 2

2013 07 23 NASA Armstrong Flight Research Center <https://youtu.be/nUMwY6rOpcl> SNC's Dream Chaser prepared for tests at NASA Dryden This 37-second time-lapse video shows engineers and technicians from Sierra Nevada Corporation Space Systems division attaching the wings and tail of the company's Dream Chaser engineering flight test vehicle at NASA's Dryden (now Armstrong) Flight Research Center. The crew spent three days preparing the vehicle for ground and free-flight tests, which were scheduled throughout the latter half of 2013. SNC is one of three companies working with NASA to develop space transportation systems capable of flying astronauts to and from low-Earth orbit and the International Space Station later this decade. [Transcript Link](#)

The work completed at NASA Armstrong will demonstrate the Dream Chaser's ability to safely land an astronaut crew on a runway, similar to the now-retired NASA Space Shuttle fleet.

For more information:

<http://www.nasa.gov/centers/dryden/home/index.html#.Ue8Ex7a8cZ0>

Credit: NASA Dryden Video Services

Date: May 2013

2013 06 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jrINfaXEqU">https://youtu.be/jrINfaXEqU</a>	UP Aerospace's SpaceLoft 7 Rocket Launches Flight Opportunities Program Payloads	<p>This 1-minute, 16-second video shows a reusable suborbital rocket launched by UP Aerospace soaring aloft from Spaceport America in New Mexico, carrying multiple technology payloads for NASA's Space Technology Mission Directorate's Flight Opportunities program.</p> <p>The SpaceLoft 7 suborbital flight June 21, 2013 provided about four minutes of micro gravity for testing of seven technology experiments in a space-relevant environment.</p>	<a href="#">Q</a>
2013 05 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XWx6-aK8lck">https://youtu.be/XWx6-aK8lck</a>	Automatic Collision Avoidance Technology (ACAT)	<p>Flight Tests Validate Collision-Avoidance System</p> <p>Flights tests of a smartphone-assisted automatic ground collision avoidance system at NASA's Dryden Flight Research Center consistently commanded evasive maneuvers when it sensed that the unmanned test aircraft was getting too close to mountainous terrain. When fully developed, the technology could help prevent controlled-flight-into-terrain accidents by general aviation and unmanned aircraft.</p>	<a href="#">Transcript Link</a>
2013 05 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Un0QdX0IPq4">https://youtu.be/Un0QdX0IPq4</a>	SNC's Dream Chaser Arrives at NASA Dryden for Tests	<p>This 2-minute, 3-second video shows Sierra Nevada Corporation Space Systems' Dream Chaser engineering flight test vehicle, arriving at NASA's Dryden (now Armstrong) Flight Research Center in Edwards, CA, May 15, 2013 to begin tests of its flight and runway landing systems. Wrapped in plastic with its wings and tail structure removed, the Dream Chaser test article was transported overland from the company's facility in Louisville, CO.</p> <p>Tests at Dryden during the summer of 2013 involved tow, captive-carry, and free-flight tests of the Dream Chaser, which is based on the HL-20 lifting body design developed and tested at NASA's Langley Research Center.</p> <p>The tests are part of pre-negotiated, paid-for-performance milestones with NASA's Commercial Crew Program (CCP), which is facilitating domestic companies' development of spacecraft and rockets that can launch from American soil into low-Earth orbit to transport crew and cargo to and from the international Space Station (ISS) and perform other research missions.</p> <p>For more info, visit: <a href="http://www.nasa.gov/commercialcrew">http://www.nasa.gov/commercialcrew</a></p>	<a href="#">Transcript Link</a>

2013 04 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/peP9h134Wc">https://youtu.be/peP9h134Wc</a>	Highest, Longest Flight To Date for Xombie & Genie	In this 1-minute, 24-second video, Masten Space Systems' Xombie space-access technology demonstrator flew its highest and longest flight to date, guided by Draper Lab's GENIE navigation and control system that is designed to replicate the speed and angle of a planetary approach.  The Xombie ascended more than 1,600 feet above ground and flew almost 1,000 feet laterally before making a pin-point vertical landing on another pad.	<a href="#">Transcript Link</a>
2013 03 28	NASA Armstrong Flight Research Center	<a href="https://youtu.be/tGmuFp0y-Tc">https://youtu.be/tGmuFp0y-Tc</a>	Women's History Month profile -- Franzeska Houtas	As a meteorologist at NASA's Dryden Flight Research Center, Edwards, Calif., Franzeska Houtas performs a critical role in the center's flight operations. An employee of Jacobs Technology, Houtas provides detailed weather briefings to flight research projects in order to maintain high level of safety, including coordinating, compiling and analyzing weather data pertinent to flights. She also maintains and operates weather equipment in support of flight projects, provides climatology data for the Edwards test range and educates Dryden personnel on weather hazards such as heat stress, lightning, high winds, and winter weather events.	<a href="#">Transcript Link</a>
2013 03 25	NASA Armstrong Flight Research Center	<a href="https://youtu.be/KX5GwBBMcU">https://youtu.be/KX5GwBBMcU</a>	SOFIA Observatory Conducts Night Checkout Flight	NASA's Stratospheric Observatory for Infrared Astronomy flew a nighttime checkout flight over northern and central California the first week of March 2013 to conduct verification and validation of aircraft and telescope systems in preparation for instrument commissioning and the Cycle 1 astronomy flights scheduled for spring 2013.	<a href="#">Transcript Link</a>
2013 03 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/fgVFzV9B8Ac">https://youtu.be/fgVFzV9B8Ac</a>	NASA Dryden Highlights 2013 Writing the Stories of the Future Today	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">Prefaced by NASA Dryden Flight Research Center director David McBride's comments at the California Science Center's Space Shuttle Endeavour exhibit grand opening, this fast-paced video highlights some of the unique aircraft, aeronautical research, airborne Earth and space science missions and educational outreach activities conducted by NASA Dryden in 2012 and planned for 2013.</a>	<a href="#">0</a>

2013 03 06	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ML7g8NXA3xQ">https://youtu.be/ML7g8NXA3xQ</a>	African-American Heritage profile -- Maikeyza Brown	Maikeyza Brown is a contract management specialist at NASA's Dryden Flight Research Center, Edwards, Calif. A native of Washington, D.C., Brown overcame obstacles to receive honors in high school and earn bachelor's and master's degrees in business administration. A 10-year career employee at Dryden, Brown sees her job as vital to spending taxpayers' dollars wisely and supporting NASA's mission.	<a href="#">Transcript</a> <a href="#">Link</a>
2013 01 02	NASA Armstrong Flight Research Center	<a href="https://youtu.be/aJcNdYQjMa0">https://youtu.be/aJcNdYQjMa0</a>	SOFIA Gets Avionics and Mission Control Systems Upgrades	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a> <a href="#">NASA's Stratospheric Observatory for Infrared Astronomy, or SOFIA, has received major upgrades to its telescope control and avionics systems that will significantly improve their efficiency and operability. The upgrades enhance the pointing and tracking capabilities of the observatory's telescope control system, while the avionics upgrades allow the SOFIA to comply with current airspace regulations.</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2012 12 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/BsMes3CPEMI">https://youtu.be/BsMes3CPEMI</a>	Neil Armstrong The Flight Research Center Years	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a> <a href="#">Famed Apollo 11 astronaut Neil Armstrong, the first man on the moon, was an engineering research test pilot at the NACA High-Speed Flight Station, later the NASA Flight Research Center, at Edwards from 1955 through 1962. This video recalls some of the many contributions he made to aerospace research during his seven-year stint at the center before he was selected for NASA's astronaut corps.</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2012 12 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4KAOD2V-JvQ">https://youtu.be/4KAOD2V-JvQ</a>	NASA Dryden 'We Turn Ideas into Reality' Updated version 12-14-2012	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a> <a href="#">This fast-paced video, led off by comments from NASA Dryden Flight Research Center's director David McBride before a group of students, highlights some of the unique aircraft, flight research projects and airborne space and environmental science missions conducted by the NASA field center in 2011 and planned for 2012, along with the center's educational and outreach activities.</a>	<a href="#">0</a>

2012 12 14	NASA Armstrong Flight Research Center	<a href="https://youtu.be/GG_Ue-4uYAO">https://youtu.be/GG_Ue-4uYAO</a>	NASA Researches the 'FaINT' Side of Sonic Booms	As the latest in a continuing progression of NASA supersonics research projects aimed at reducing or mitigating the effect of sonic booms, the Farfield Investigation of No Boom Threshold, or FaINT, flight research project will help engineers better understand evanescent waves, an acoustic phenomenon that occurs at the very edges or just outside of the cone or envelope where sonic booms are heard.	<a href="#">Transcript</a> <a href="#">Link</a>
2012 11 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/F8RSRjbPO50">https://youtu.be/F8RSRjbPO50</a>	SCA-Endeavour Final Ferry Arrival at EAFB & Dryden	The Space Shuttle Endeavour atop NASA Shuttle Carrier Aircraft (SCA) 905 arrived at Edwards Air Force Base on Sept. 20, 2012 after the third leg of its four-segment final ferry flight from NASA's Kennedy Space Center in Florida to Los Angeles for delivery to the California Science Center museum.  This 6-minute, 20-second video captures the flyover of Edwards, landing, and taxiing to NASA's Dryden (now Armstrong) Flight Research Center.	<a href="#">Transcript</a> <a href="#">Link</a>
2012 09 27	NASA Armstrong Flight Research Center	<a href="https://youtu.be/bVPPNDhOWutk">https://youtu.be/bVPPNDhOWutk</a>	F A-18 extended view of Space Shuttle Endeavour's flyover Southern California	This 15-minute, 11-second video shows the Shuttle Carrier Aircraft-- Endeavour extended aerial view during its Tour of Southern California on September 21, 2012. Views included Malibu, Dodger Stadium, California Science Center, the Los Angeles Colosseum, downtown Los Angeles, the Hollywood Sign, Griffith Observatory, Pasadena, the Rose Bowl, Santa Monica, Long Beach, Angel Stadium of Anaheim, Space X, Universal Studios, and Point Mugu before landing at Los Angeles International Airport at 12:51 pm PT.  Safety chase and in-flight photography were provided by NASA Dryden (now Armstrong) Flight Research Center's F/A-18 aircraft.  For more information: <a href="http://www.nasa.gov/centers/dryden/status_reports/SCA_Endavour_status_09_12.html">http://www.nasa.gov/centers/dryden/status_reports/SCA_Endavour_status_09_12.html</a>	<a href="#">0</a>
2012 09 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/79_Dn_eC6fNk">https://youtu.be/79_Dn_eC6fNk</a>	SCA-Endeavour Griffith Observatory and Hollywood Sign flyover during Tour of California	After landing at Edwards Air Force Base on September 20th for an overnight stay at NASA's Dryden (now Armstrong) Flight Research Center, the Shuttle Carrier Aircraft--Endeavour combo flew over Southern California and the Los Angeles area.  This 2-minute, 52-second video shows the Griffith Observatory and the Hollywood Sign on September 21, 2012.	<a href="#">0</a>

2012 09 24	NASA Armstrong Flight Research Center	<a href="https://youtu.be/d2QieE-cr3c">https://youtu.be/d2QieE-cr3c</a>	Shuttle Endeavour rides transporter into the United Hangar at LAX	This 3-minute, 37-second video shows the Space Shuttle Endeavour riding a transporter into the United Airlines hangar at LAX. The Shuttle Endeavour will remain housed in the United Hangar until its journey to the California Science Center, which is scheduled to begin October 12, 2012.	<a href="#">Transcript</a> <a href="#">Link</a>
				For more information click here: <a href="http://www.nasa.gov/centers/dryden/status_reports/SCA_Endavour_status_09_12.html">http://www.nasa.gov/centers/dryden/status_reports/SCA_Endavour_status_09_12.html</a>	
2012 09 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ww1YXo_vDo">https://youtu.be/Ww1YXo_vDo</a>	SCA-Endeavour Antelope Valley flyover during Tour of California	This 13-minute, 3-second video shows the SCA-Endeavour combo lifting off Edwards' Runway 04R at about 8:17 am on September 21, 2012, accompanied by a NASA F/A-18 chase plane.	<a href="#">Transcript</a> <a href="#">Link</a>
				It began its California tour with low-level flyovers of the communities of Palmdale, Lancaster, Rosamond, California City, and Mojave before heading north to Sacramento and the San Francisco Bay Area.	
2012 09 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/zkhl4QFaBmE">https://youtu.be/zkhl4QFaBmE</a>	SCA--Endeavour aerial view during Tour of Southern California	After landing at Edwards Air Force Base on September 20th for an overnight stay at NASA's Dryden (now Armstrong) Flight Research Center, the Shuttle Carrier Aircraft--Endeavour combo flew to Northern California and then returned to the Los Angeles area on September 21, 2012.	<a href="#">Transcript</a> <a href="#">Link</a>
				NASA Dryden's F/A-18 aircraft provided safety chase.	
				It flew directly over Malibu, Dodger Stadium, California Science Center, the Los Angeles Colosseum, downtown Los Angeles, and the Hollywood Sign before landing at Los Angeles International Airport at 12:51 pm PT.	
2012 08 08	NASA Armstrong Flight Research Center	<a href="https://youtu.be/uUwRV3_VnjU">https://youtu.be/uUwRV3_VnjU</a>	Transformed X-48C Takes to the Air on First Flight	Duration: 1 minute, 49 seconds. <a href="http://www.nasa.gov/centers/dryden/news/NewsReleases/2012/12-16.html">http://www.nasa.gov/centers/dryden/news/NewsReleases/2012/12-16.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
				<a href="#">The remotely operated X-48C Blended Wing Body aircraft lifts off Rogers Dry Lake at Edwards Air Force Base, Calif., on its first test flight Aug. 7, 2012. The sub-scale technology demonstrator, modified from the prior X-48B configuration, began a new flight test phase in a partnership between NASA and The Boeing Company's Phantom Works research and technology division.</a>	

2012 05 29	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Gn181jxYrtI">https://youtu.be/Gn181jxYrtI</a>	FA18 FAST Offers Advanced Systems Test Capability	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">NASA's Dryden Flight Research Center has modified an FA18A Hornet aircraft with additional research flight control computer systems for use as a Full-scale Advanced Systems Test Bed. Previously flown in the Active Aeroelastic Wing project, the FA18's research computers have been upgraded to enable integrated active control with structural feedback and simulation of control system failures.</a>	<a href="#">Transcript Link</a>
2012 04 20	NASA Armstrong Flight Research Center	<a href="https://youtu.be/NNpEgijVD0p4">https://youtu.be/NNpEgijVD0p4</a>	NASA Dryden - 'We Turn Ideas into Reality'	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">This fast-paced video, led off by comments from NASA Dryden Flight Research Center's director David McBride before a group of students, highlights some of the unique aircraft, flight research projects and airborne space and environmental science missions conducted by the NASA field center in 2011 and planned for 2012, along with the center's educational and outreach activities.</a>	<a href="#">Transcript Link</a>
2012 03 12	NASA Armstrong Flight Research Center	<a href="https://youtu.be/3pt8nFcLRY">https://youtu.be/3pt8nFcLRY</a>	NASA's Flight Opportunities Program	The focus of NASA's Flight Opportunities Program is to facilitate low-cost access to suborbital space, where researchers can test technologies using commercial space vehicles. The Agency is encouraging the growth of this emerging industry.  The suborbital environment is the region of the Earth's atmosphere between altitudes of 65,000 feet and 350,000 feet where technologies encounter many of the same conditions as spaceflight such as weightlessness, increased radiation and vibrations on launch and landing. The flights can quickly test and validate these new technologies before launch to the International Space Station or further into space.  Duration: 3 minutes, 41 seconds.  For more information, click here: <a href="https://flightopportunities.nasa.gov/">https://flightopportunities.nasa.gov/</a>	<a href="#">Transcript Link</a>
2012 03 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Hbm2Fct9pHc">https://youtu.be/Hbm2Fct9pHc</a>	Unmanned Aircraft Systems at NASA Dryden	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">NASA Dryden has a heritage of developmental and operational experience with unmanned aircraft systems. Work on Boeing's sub-scale X-36 Tailless Fighter Agility Research Aircraft, X-48 Blended Wing Body and full-scale X-45 Unmanned Combat Air Vehicle technology demonstrators helped pave the way for current use of Global Hawk and Ikhana (Predator B) UAS for environmental and aeronautical research.</a>	<a href="#">Transcript Link</a>

2011 12 22	NASA Armstrong Flight Research Center	<a href="https://youtu.be/XDUQ1ci4jMo">https://youtu.be/XDUQ1ci4jMo</a>	WSPR	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a> <u>The Waveforms and Sonic boom Perception and Response, or WSPR, project gathered data from a select group of more than 100 volunteer Edwards Air Force Base residents on their individual attitudes toward sonic booms produced by aircraft in supersonic flight over Edwards.</u>	<a href="#">Transcript Link</a>
				<u>NASA and industry are studying technology that will reduce the noise and annoyance associated with sonic booms to the point where aircraft flying over populated areas at supersonic speeds do not disturb the peace, and aviation and governmental authorities may consider lifting prohibitions. But before the current restrictions on supersonic flight over land can be changed, much research is needed to understand how individuals and communities react to low-noise sonic booms.</u>	
				<u>WSPR's primary purpose is to develop data collection methods and test protocols for future public perception studies in communities that do not usually experience sonic booms. The base's unique flight-test airspace puts Edwards residents in a position to experience loud booms regularly, so their reactions to low-noise booms will be a valuable guide for future work in sonic boom perception and response.</u>	
				<u>Dryden's partners in the WSPR effort include NASA's Langley Research Center, Wyle Laboratories, Gulfstream Aerospace Corp., Fidell Associates Inc., Pennsylvania State University and Tetra Tech. The cooperation of Edwards Air Force Base personnel was crucial to</u>	
2011 11 16	NASA Armstrong Flight Research Center	<a href="https://youtu.be/j85jlc1Zfk4">https://youtu.be/j85jlc1Zfk4</a>	The Aeronautics Test Program at NASA's Dryden Flight Research Center	<a href="http://www.aeronautics.nasa.gov/atp/">http://www.aeronautics.nasa.gov/atp/</a> <u>ATP offers government agencies, corporations and institutions the total package— unmatched basic and applied research and experimental opportunities that reflect four generations of accumulated aerospace skill and experience. ATP is built upon a nationwide team of highly trained and skilled staff whose backgrounds and education encompass every aspect of aerospace testing and engineering.</u>	0
				<u>Looking to the future, ATP continues to develop and implement a facility investment and divestment plan to fully support the current and long-term missions of NASA, the Department of Defense and American industry.</u>	
2011 09 23	NASA Armstrong Flight Research Center	<a href="https://youtu.be/Ho6FnQylpyc">https://youtu.be/Ho6FnQylpyc</a>	NASA Dryden's Mate De-mate Device	This 13-minute, 37-second video is a mini documentary about the Mate De-mate Device (MDD) at NASA Dryden (now Armstrong) Flight Research Center, used to lift the Space Shuttle onto the Boeing 747 Shuttle Carrier Aircraft (SCA) for its return flight to the Kennedy Space Center in Florida.	<a href="#">Transcript Link</a>
				For more information on the Mate De-Mate Device: <a href="https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-014-DFRC.html">https://www.nasa.gov/centers/armstrong/news/FactSheets/FS-014-DFRC.html</a>	

2011 08 18	NASA Armstrong Flight Research Center	<a href="https://youtu.be/ZBzMx3_E3N4">https://youtu.be/ZBzMx3_E3N4</a>	Fred Haise - An American Hero	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">Pilot, astronaut, scholar, businessman, role model... Fred Haise is the quintessential American Hero. Best known as one of the three NASA astronauts who survived potential tragedy on the ill-fated Apollo 13 lunar mission in 1970, Haise has also distinguished himself in other aerospace endeavors, academia, private industry and community service.</a>	<a href="#">Transcript Link</a>
2011 08 04	NASA Armstrong Flight Research Center	<a href="https://youtu.be/vx4gJ8GU-lo">https://youtu.be/vx4gJ8GU-lo</a>	NASA's 747 SCAs - Birds of a Feather Flock Together.mov	For the first time ever, NASA's two highly modified Boeing 747 Shuttle Carrier Aircraft briefly flew in formation over the Edwards Air Force Base test range Aug. 2. Both aircraft were scheduled to be in the air on the same day, NASA 911 (foreground) on a flight crew proficiency flight, NASA 905 (rear) on a functional check flight following maintenance operations.  Since both aircraft were scheduled to be in the air at the same time, SCA pilot Jeff Moultrie of Johnson Space Center's Aircraft Operations Directorate took the opportunity to have both SCA's fly in formation for about 20 minutes while NASA photographer Carla Thomas captured still and video imagery from a NASA Dryden F/A-18.  For more information, click here: <a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>	<a href="#">Transcript Link</a>
2011 08 01	NASA Armstrong Flight Research Center	<a href="https://youtu.be/CD1HEEfAvk0">https://youtu.be/CD1HEEfAvk0</a>	Can You Touch Your Dream	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>	<a href="#">Transcript Link</a>
2011 04 21	NASA Armstrong Flight Research Center	<a href="https://youtu.be/5Vmc74bragl">https://youtu.be/5Vmc74bragl</a>	Aeronautics Research Mission Directorate- NASA Dryden Highlights	<a href="http://www.nasa.gov/centers/dryden/home/index.html">http://www.nasa.gov/centers/dryden/home/index.html</a>  <a href="#">NASA's Aeronautics Research Mission Directorate (ARMD) works to solve the challenges that still exist in our nation's air transportation system: air traffic congestion, safety and environmental impacts.</a>  <a href="#">Solutions to these problems require innovative technical concepts, and dedicated research and development. NASA's ARMD pursues the development of new flight operation concepts, and new tools and technologies that can transition smoothly to industry to become products.</a>	<a href="#">Transcript Link</a>

2011 03 31	NASA Armstrong Flight Research Center	<a href="https://youtu.be/gqCOCazv90w">https://youtu.be/gqCOCazv90w</a>	Lori Losey - The Woman Behind the Video Camera	The often-spectacular aerial video imagery of NASA flight research, airborne science missions and space satellite launches doesn't just happen. Much of it is the work of Lori Losey, senior video producer and aerial videographer at NASA's Dryden Flight Research Center. Losey has traveled the world for two decades, much of the time in the back seat of high-performance aircraft, videocam to her eye.	<a href="#">Transcript</a> <a href="#">Link</a>
2011 02 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/nT1sUJCTFig">https://youtu.be/nT1sUJCTFig</a>	Space Shuttle Atlantis STS-125	This 1-minute, 45-second video is a time-lapse version of Space Shuttle Atlantis undergoing post-mission servicing and ferry flight preparations in NASA Dryden's Mate-Demate Device.	<a href="#">Transcript</a> <a href="#">Link</a>
2011 02 17	NASA Armstrong Flight Research Center	<a href="https://youtu.be/TF2vViYM2I">https://youtu.be/TF2vViYM2I</a>	NASA Dryden Receives 'New' F-15Ds	NASA's Dryden Flight Research Center has received three F-15D Eagle aircraft from the U.S. Air Force for use in flight research and mission support roles. The demilitarized high-performance aircraft arrived at NASA Dryden Sept. 21 after being transferred from the 325th Fighter Wing at Tyndall Air Force Base, Florida.  <a href="http://www.nasa.gov/centers/dryden/Features/F-15Ds_arrive_at_dryden.html">http://www.nasa.gov/centers/dryden/Features/F-15Ds_arrive_at_dryden.html</a>	<a href="#">Transcript</a> <a href="#">Link</a>
2011 02 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/4C_prwMkRKQ">https://youtu.be/4C_prwMkRKQ</a>	NASA Dryden 2010 Project Highlights		<a href="#">Transcript</a> <a href="#">Link</a>

2011 02 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/y2iUI5vuuSA">https://youtu.be/y2iUI5vuuSA</a>	SOFIA Observatory Finishes Open- Door Flight Tests	NASA's SOFIA flying observatory recently completed the second series of envelope-expansion flight tests with its telescope door open. The SOFIA is now fully cleared for astronomy missions at altitudes up to 45,000 feet,	<a href="#">Transcript Link</a>
2011 02 11	NASA Armstrong Flight Research Center	<a href="https://youtu.be/jBCOOyqxJfQ">https://youtu.be/jBCOOyqxJfQ</a>	Dryden's ER-2 Mobile Chase Vehicle	Landing an ER-2, NASA's long-winged, high-altitude Earth science aircraft, can be tricky. Its wings give the aircraft glider-like qualities, the aircraft is sensitive to crosswinds, and its ascent and descent rates are fast and steep. Even normal landings can be difficult for the pilot, encased in a full pressure suit. That's where NASA's recently acquired Dodge Charger safety chase car comes in.	<a href="#">Transcript Link</a>
2011 02 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/HK240GKZ6pU">https://youtu.be/HK240GKZ6pU</a>	Robert T. McCall Mural This Great Moment	Artist Dr. Robert T. McCall reflects on "This Great Moment" in aviation history as he creates the Centennial of Flight mural for the Dryden Flight Research Center in 2001	<a href="#">Transcript Link</a>
2011 02 10	NASA Armstrong Flight Research Center	<a href="https://youtu.be/flKjV53VFy4">https://youtu.be/flKjV53VFy4</a>	Bohn-Meyer Math and Science Odyssey Feb. 4, 2011	More than 200 Antelope Valley seventh-graders experienced a variety of hands-on learning activities Feb. 4 during the 2011 Bohn-Meyer Math and Science Odyssey at Antelope Valley College in Lancaster, Calif.  Students from eight area middle schools attended workshops led by professionals in the fields of engineering, meteorology, physics, chemistry and mathematics from NASA Dryden Flight Research Center, Antelope Valley College and Lockheed Martin. The event is named for Marta Bohn-Meyer, former chief engineer at NASA Dryden at Edwards Air Force Base. Bohn-Meyer, who was a staunch supporter of and regular participant in the event. Bohn-Meyer died in a private plane accident in 2005.	<a href="#">Transcript Link</a>