

# AEROSPACE VALLEY AIR SHOW

EDWARDS AFB  
16-18 OCTOBER '22

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The first Aerospace Valley Air Show was dedicated to showcasing the best of STEM (Science, Technology, Engineering, and Math) and aviation, organized by the 412 Test Wing, Edwards AFB. The last air show at Edwards AFB was 13 years ago. This was also to celebrate the 75th anniversary of both, the formation of the U.S. Air Force and the breaking of the sound barrier in the skies above Edwards AFB. Edwards AFB is located in California's Antelope Valley, called Aerospace Valley, which is also home to Air Force Test Plant 42 and the Mohave Air and Space Port, three aviation installations with a rich history in

aviation. Many first flights took place from Edwards AFB, and plenty of weapons and aircraft have been extensively tested there. The military base began as a bombing range in 1933 and became a major bomber training base in World War II. The Air Force Flight Test Center originated during the darkest days of the

war and has since achieved more major milestones in flight than anywhere else in the world. Aircraft ranging from the Bell XP-59 Airacomet to the Bell X-1, the NASA Space Shuttle, and the B-2 bomber were all first tested at Edwards AFB. This proud history continues with flight test programs like

the F-35 Lightning II fifth generation fighter, airborne laser weapons, and unmanned aerial vehicle (UAV) programs. With upcoming projects like the new USAF B-21 bomber, Edwards AFB will continue to play a very important role in the future.

## 75th Anniversary of Breaking the Sound Barrier

The event started on Friday and was for invited guests only. It marked the 75th anniversary of breaking the sound barrier on 14 October 1947. Bell's team, with test pilot Chuck Yeager in the cockpit of the Bell X-1,

Rockwell B-1B Lancer assigned to 419th FLTS at Edwards AFB.





made history as the sound barrier was broken for the first time. As part of the celebration, the supersonic corridor above Edwards AFB was renamed the 'Bell X-1 Super Sonic Corridor'.

Because of the 75th anniversary, several supersonic booms were performed by fighter jets of the NASA Armstrong Flight Research Center and the 412 Test Wing during the air show days. A special STEM (Science, Technology, Engineering, and Math) exhibition was set up on Friday to inspire the young next generation. It consisted of more than 60 hands-on displays, flight simulators, aircraft, and several other activities. Educators, pilots, and maintainers spoke enthusiastically about their jobs. The exhibition was well attended and turned out to be a very successful event.

#### Public Air Show

The public air show on Saturday, 15 October, and Sunday, 16 October consisted of a static and flying

display. Some very unique aircraft could be seen in the static display. The most notable was the Darkstar, famous for the new movie 'TOP GUN: Maverick'.

Darkstar was specially designed and built for this movie by the famous Lockheed Skunk Works at their facility at Air Force Test Plant 42 in Palmdale. Darkstar was nicely parked in the static display alongside another famous known Skunk Works icon, an SR-71A Blackbird. The SR-71 is normally kept in one of the hangars at Edwards AFB and was placed in the static, especially for the air show. Furthermore, several aircraft from the NASA Armstrong Flight Research Center at Edwards AFB could be seen in the static display. These aircraft are rarely seen outside Edwards AFB.

There were also several civilian aircraft that took part in the static display. The last flying L-1011 Tri-Star Stargazer from Northrop Grumman made the short flight from Mohave Air and Space Port and took part in the static show. Also, an Antonov 2 biplane and various WW II era aircraft such as a C-47 Dakota,

The 412th Test Wing, in conjunction with NASA Armstrong Flight Research Center, conducted a flyover over the greater Antelope Valley in California ahead of the 2022 Aerospace valley air show. **Photo by U.S. Air Force, 412th Test Wing**





**Top:** This aircraft, called *Darkstar*, was designed for the movie 'TOP GUN: Maverick'. It was built in cooperation between the movie producers and Lockheed Martin and is not capable of flying.

**Bottom:** Lockheed SR-71A *Blackbird*. It first flew on 17 August 1965 and served as the Palmdale test aircraft until being replaced by SR-71A #61-7972 in 1985. Its last flight on 24 January 1985 and has accumulated 1,993.7 hours of flight time.

Photo by Dennis van der Wiel





Rockwell B-1B  
*Lancer* assigned  
to 419th FLTS at  
Edwards AFB.



Boeing B-52H  
*Stratofortress*  
assigned to 23rd  
BW at Minot AFB.





NASA was well represented in the flying program and also flew a formation consisting of an F-15B Eagle, a C-20A Gulfstream III, and a F/A-18B Hornet, the latter still wearing the markings of its former operator, Flight Test squadron VX-23. After various fly-bys, the Eagle and Hornet left the formation, after which they climbed to a higher altitude only to reappear again not much later. This time, flying fast and breaking the sound barrier and creating the so-called "sonic boom". Various civilian aircraft also took part in the flying displays: A demo was flown by Gregory Colyer in his beautiful T-33 Ace Maker, a North American SNJ-5 Texan nicknamed War Dog was flown by John Colver, and a P-51D Mustang participated in the flying program. This Mustang with the name Man o War looked like it just came out of the factory and flew a great display. It is owned by the Palm Springs Air Museum and regularly participates in Air Shows in the US. The flying displays ended with the US Air Force Demonstration Team Thunderbirds, entertaining an enthusiastic crowd with their aerial performance for almost an hour.



a Lockheed L-18 Lodestar, and a former Marine Corps PBJ-1 Mitchel Bomber of the Commemorative Air Force could be seen, all of the aircraft looking in pristine condition.

### Flying display

The flying display started with the parachute jumpers from the USAF parachute team 'Wings of Blue', jumping from a C-17 Globemaster III from the 412th Test Wing. One of the para jumpers carried a large U.S. Flag and landed close to the enthusiastic audience.

After that, it was time for jet noise, as some of the based F-35s, F-22s, and F-16s simulated the recovery of a captured airfield. Directly after that, the F-35s and F-22s were hooking up with a KC-135R Stratotanker and demonstrated air-to-air refueling. To complete the show of force, a B-1B Lancer of the 412th Test Wing demonstrated how effective they can take out an enemy, which resulted in quite a few explosions and a large wall of smoke and fire and ended with a nice victory roll.

McDonnell Douglas F-15B Research Testbed (left) and McDonnell Douglas F/A-18B (right) of NASA's Neil A. Armstrong Flight Research Center at Edwards AFB.



**Main Image:** An KC-135 Stratotanker simulates refueling two F-35As. **Insets:** Lockheed F-35A Lightning II assigned to 411 FLTS at Edwards AFB.





Aircraft of NASA's Neil A. Armstrong Flight Research Center:  
**main image:** McDonnell Douglas F-15B, Gulfstream C-20A, and F/A-18B,  
**left inset:** Gulfstream C-20A,  
**right inset:** Gulfstream C-20A and McDonnell Douglas F-15B.



### Boeing 747SP SOFIA

During the first day of the air show weekend, Armstrong Flight Research Center's Boeing 747SP SOFIA made a "one and only" visit to an air show. This specially modified Boeing 747SP carries a 17-tonne glass reflector telescope, flying into the stratosphere to an altitude of 45,000 feet to escape 99% of the earth's atmospheric water vapor. It concluded its final science flight on 29 September 2022. After several flybys for the public, the aircraft landed at Edwards AFB. It was towed to the static display where the public was given the opportunity to view the aircraft from the inside and could talk with the crew.

After the end of the air show, the aircraft departed back home. SOFIA took off for one last time from her home

base NASA Armstrong Flight Research Center. The crew performed one last flyover of the base and then left for Davis Monthan AFB, Arizona. There, SOFIA will be prepared for display in the Pima Air Space Museum.

NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA), a Boeing 747SP aircraft, flies past the ramp.





▲▼ Boeing C-17A *Globemaster III* assigned to 418th FLTS at Edwards AFB.



KC-46A *Pegasus* assigned to 412th TW at Edwards AFB  
Lockheed L-1011 TriStar f Northrop Grumman used to launch rockets into space ▼▲



Photo by Dennis van der Wiel





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- 1 The Los Angeles County Fire Department maintains a fleet of ten helicopters – five Bell 412s (1 x 412, 2 x 412EP, 2 x 412EH) and five Sikorsky S-70A/S-70i Firehawks – for paramedic transport, hoist rescues and wildland firefighting. This Bell 412EP is configured for aerial firefighting with a belly-mounted external tank that can hold 360 gallons of water or fire retardant. The tank can be filled by a draft hose.
- 2 Airbus H125 (previously AS350 B3e) of the California Highway Patrol.
- 3, 4 Sikorsky MH-60S *Seahawk* assigned to Air Test and Evaluation Squadron 31 (VX-31) "Dust Devils," based at the Naval Air Weapons Station China Lake, California. The Dust Devils provide SAR services not only for the military but also for the police and fire department. Its MH-60s are equipped with night vision and high-altitudes capabilities that civilian helicopters usually do not have.
- 5 Bell UH-1H Huey II of Kern County Sheriff's Office Air Support Unit.





Aircraft of NASA's Neil A. Armstrong Flight Research Center:

**top left:** Beech T-34C Turbo Mentor,

**left inset:** Aeromot AMT-200S Super Ximango

**above:** McDonnell Douglas F-15B Eagle.





▲ Assigned to 461st FLTS at Edwards AFB, AF-01 was the first CTOL F-35 and completed its maiden flight on November 14, 2009.  
▼ The Edwards AFB museum's F-16XL (S/N 75-0749) was the first of two F-16XLs built. It flew for the first time on 3 July 1982.



U.S. Navy Lockheed Martin F-35C *Lightning II* (with wingtips folded) and Northrop F/A-18F *Super Hornet* assigned to VX-9 at NAWS China Lake ▲ ▼











Photo this page U.S. Air Force by 412th Test Wing





Photo by U.S. Air Force, 412th Test Wing



The Edwards Air Show was a great event, especially considering that after 13 years, an event was finally held again at this interesting location. The STEM exhibition can be called a great success and for the general public, it was a show to never forget. However, for the aviation enthusiasts and photographers who traveled to Edwards AFB from all over the world, it was a bit disappointing at some points: As the display line faced into the sun the whole day and all the aircraft used the runway far away from the general public. Also, the flypast of the based fleet was missed, which is

one of the highlights of the Air Show for many aviation photographers. On the other hand, the air show still had much to offer and was well arranged. Many unique aircraft could be seen in both, the static and flying displays, some of which are usually not seen at an air show.

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**Main image and inset above:** Members of the WINGS OF BLUE freefall and parachute demonstration team from the U.S. Air Force Academy.

**Inset left:** Canadair T-33AN Silver Star 3 built in 1954.





The Commemorative Air Force's P-51 Mustang "Man-O-War" sits at on the main ramp at Edwards AFB. Photo U.S. Air Force by 412th Test Wing