

417th FLIGHT TEST SQUADRON



MISSION

LINEAGE

6517th Test Squadron designated and activated, 10 Mar 1989
Redesignated 417th Test Squadron, 2 Oct 1992
Redesignated 417th Flight Test Squadron, 1 Mar 1994
Inactivated, 1 Oct 1995
Activated, 16 Mar 2006

STATIONS

Edwards AFB, CA, 10 Mar 1989-1 Oct 1995
Edwards AFB, CA, 16 Mar 2006

ASSIGNMENTS

6510th (later, 412th) Test Wing, 10 Mar 1989
412th Operations Group, 1 Oct 1993-1 Oct 1995
412th Operations Group, 16 Mar 2006

WEAPON SYSTEMS

C-17, 1989-1995
YAL-1A, 2006

COMMANDERS

LTC Robert L. Black, 10 Mar 1989
LTC George G. London Jr., 12 Nov 1992
LTC Barton E. Henwood, 3 Dec 1993-1 Oct 1995
LTC Barry St. Germain, 16 Mar 2006
LTC Michael R. Contratto, 15 May 2008

HONORS

Service Streamers

None

Campaign Streamers

None

Armed Forces Expeditionary Streamers

None

Decorations

Air Force Outstanding Unit Award

15 Sep 1991-15 Jul 1993

EMBLEM

On a disc Azure, a bendlet superimposed by a bend sinister Or, a stylized dragon in profile Vert, eyed of the second, nostril and talons Sable, grasping in sinister hind claw and tail a missile bendwise Argent (Silver Gray), inflamed Yellow, all within a narrow border Yellow. Attached above the disc, a Blue scroll edged with a narrow Yellow border and inscribed "TRUST BUT VERIFY" in Yellow letters. Attached below the disc, a Blue scroll edged with a narrow Yellow border and inscribed "417TH FLIGHT TEST SQ" in Yellow letters. **SIGNIFICANCE:** Ultramarine blue and Air Force yellow are the Air Force colors. Blue alludes to the sky, the primary theater of Air Force operations. Yellow refers to the sun and the excellence required of Air Force personnel. The dragon represents the unit's plane--a large, ferocious beast that projects energy. The missile represents the target of the Airborne Laser weapon system. The crossroads represent the crossing-over from conventional weapons to laser weapons. The unit's motto is "Trust But Verify." Approved on 25 Jun 2007

MOTTO

NICKNAME

OPERATIONS

Flight testing of the C-17A, 1989-1995. Ground and flight testing of the YAL-1A (airborne laser aircraft), 2006.

A combined contractor and a Department of Defense team of hundreds of people making up a Combined Test Force (CTF) provided flight test support. The U.S. Air Force side of the CTF included representatives of the U.S. Air Force Operational Test and Evaluation Center (AFOTEC) to provide an assessment of the operational utility of the weapon system. U.S. Army and U.S. Marine Corps personnel also participated to judge the suitability of the aircraft to support joint service needs. The C-17 CTF was located at Edwards AFB and designated the 417th Test Squadron (initially the 6517th).

3/17/2006 - A stand-up ceremony to recognize the 417th Flight Test Squadron was held Thursday at the Birk Flight Test Facility on South Base. The 417th FLTS, under the command of Lt. Col. Barry St. Germain, is responsible for the Airborne Laser Program, formerly a part of the 452nd Flight Test Squadron's ABL Test Force. "Standup of the squadron formalizes the priority of the program for the 412th Test Wing," Colonel St. Germain said.

The squadron will encompass about 750 people, including the contractor workforce and the government workforce together. The ABL is an airborne-directed energy weapon system. The YAL-1A is a prototype that employs a highly-modified, 747-400 airframe equipped with sensors, lasers and sophisticated optics to find, track and destroy ballistic missiles in their boost, or ascent, phase, said Robert Suszek, program manager for the Airborne Laser. Talking about the formation of the squadron, Mr. Suszek said, "It recognizes the autonomy of the mission.

"We're coming up on a milestone with weapons systems integration on the airplane and missile-shoot down," he said. "So as we come up on that, (the Air Force Flight Test Center) is recognizing that we're going to need our own engineering cadre, our own test planning cadre, (and) our own operations cadre. With that comes the squadron." Currently the YAL-1A is in Wichita, Kan., receiving modifications to the sub-structure of the aircraft to accommodate the integration of the weapons system, which is scheduled for completion by the end of the calendar year, Mr. Suszek said.

The ABL is a component of Missile Defense Agency's boost-phase segment designed to destroy enemy missiles soon after they are launched to provide defense of the United States, its international allies, and its deployed troops. The 417th Flight Test Squadron was originally activated here as the 6517th Test Squadron on March 10, 1989. It was dedicated to the C-17 Globemaster III test program. On Oct. 2, 1992, the squadron was re-designated the 417th Test Squadron, and on March 1, 1994, it became the 417th Flight Test Squadron. In October 1995, the squadron was inactivated and the C-17 program was consolidated with the 418th Flight Test Squadron.

2/24/2012 The aircraft known for turning science fiction into fact, more accurately recognized as the YAL-1A Airborne Laser Test Bed, took to the skies here for the last time during its final ferry flight to Davis-Monthan Air Force Base, Ariz., Feb. 14. The ALTB, which was a part of the Birk Flight Test Facility here for more than nine years, was a modified Boeing 747-400 Freighter that housed two solid-state lasers and a megawatt-class chemical oxygen iodine laser that could use directed energy as a viable technology against ballistic missiles.

"February 14 represents the end of a historic era in airborne directed energy research, not only for Edwards Air Force Base but for the Department of Defense at large," said Lt. Col. Jeff Warmka, the director of the ALTB Combined Test Force. "When the aircraft departs, she won't be coming back to Edwards Air Force Base. The test program is closing, so to us it's a sad and reflective day ... but not without optimism and great pride because we intimately know the program's historic achievements and know what we did will benefit the nation in the future."

Before the aircraft's final departure, leaders from the contractor and government workforce gathered for an all-hands meeting inside the Birk Flight Test Facility to reflect and commend those involved with the accomplishments the aircraft had while it was tested at Edwards AFB since December 2002. "This program was a unique collection of many of the best experts in the

field of laser technology and flight test," said John Wong, the ALTB CTF director of engineering. "The (ALTB) testing accomplished here was something that wouldn't have been possible without the full combined team effort of industry, government, Air Force, MDA and (Air Force Flight Test Center) personnel."

During its time here, one of ALTB CTF's significant tests involved the successful engagement and destruction of a boosting solid-fueled Terrier Black Brant rocket that was launched from the ground on San Nicolas Island, Calif., Feb. 3, 2010. "The professional ALTB team built and tested the world's first airborne megawatt-class laser and demonstrated the ability to acquire and track a boosting missile, actively compensate the high-energy laser for atmospheric distortions, and place a stabilized laser spot on a boosting missile over hundreds of kilometers," Warmka said. "In February 2010, we reached the 'mountain top' by successfully shooting down a threat-representative ballistic missile -- proving the viability of directed energy for missile defense."

Eight days after that test, the ALTB team was once again able to successfully engage and destroy a boosting liquid-fueled Foreign Military Acquisition missile. On the same flight, it successfully engaged a boosting Terrier Black Brant rocket, meeting all test objectives without negating the rocket. "The whole program was a highlight from a (test) center's standpoint," Wong added. "All the things we did in this program were new and firsts for the Air Force. We've never flown a megawatt-class COIL on an airplane before and that's true for both the Air Force and the Air Force Flight Test Center."

Once the aircraft lands at Davis-Monthan AFB, the ALTB will be processed into storage at the Air Force's Aerospace Maintenance and Regeneration Group, also known as the "Boneyard." "The bottom line is the Airborne Laser test program is closing," Warmka said. "After very successfully accomplishing its key Missile Defense Agency Knowledge Points, the program transitioned into a science and technology effort in 2010. Over the past two years, MDA's Directed Energy Program Element continued to receive reduced appropriations. In consideration of the reduced funds, MDA began program closeout and awarded a contract for storage."

At Davis-Monthan, the ALTB and its associated systems will be screened in accordance with DOD procedures for reutilization, according to Warmka. "Although the 'summit' is important, the journey up and down the mountain integrating and testing this one-of-a-kind platform will yield insights for years to come," Warmka said.

Air Force Order of Battle

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Sources

Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.

The Institute of Heraldry. U.S. Army. Fort Belvoir, VA.

Air Force News. Air Force Public Affairs Agency.