

# 1<sup>st</sup> AIR AND SPACE TEST SQUADRON



## LINEAGE

1<sup>st</sup> Photographic Squadron constituted, 22 Dec 1939

Activated, 1 Feb 1940

Redesignated 1<sup>st</sup> Mapping Squadron, 13 Jan 1942

Redesignated 1<sup>st</sup> Photographic Mapping Squadron, 9 Jun 1942

Redesignated 1<sup>st</sup> Photographic Charting Squadron, 11 Aug 1943

Redesignated 1<sup>st</sup> Photographic Reconnaissance Squadron, Very Heavy, 10 Nov 1944

Redesignated 1<sup>st</sup> Reconnaissance Squadron, Very Long Range, Photographic-RCM, 4 Oct 1945

Redesignated 1<sup>st</sup> Reconnaissance Squadron, Very Long Range, Photographic, 13 Nov 1945

Inactivated, 10 Mar 1947

Disbanded, 8 Oct 1948

1<sup>st</sup> Test Squadron constituted, 12 Sep 1969

Activated, 15 Oct 1969

1<sup>st</sup> Reconnaissance Squadron, Very Long Range, Photographic, reconstituted and consolidated with  
1<sup>st</sup> Test Squadron, 19 Sep 1985

Inactivated, 30 Oct 1991

Redesignated 1<sup>st</sup> Air and Space Test Squadron, 28 Oct 2003

Activated, 1 Dec 2003

## STATIONS

Bolling Field, DC, 1 Feb 1940

Bradley Field, CT, 5 Dec 1941

MacDill Field, FL, 15 Jan 1944

Smoky Hill AAFld, KS, 26 Oct 1944-31 Jul 1945

Kadena, Okinawa, 9 Sep 1945

Clark Field, Philippines, 11 Feb-10 Mar 1947  
Clark AB, Philippines, 15 Oct 1969-30 Oct 1991  
Vandenberg AFB, CA, 1 Dec 2003

## **DEPLOYED STATIONS**

Accra, Gold Coast, British West Africa, 11 Mar-13 Oct 1944

## **ASSIGNMENTS**

Office of Chief of Air Corps, 1 Feb 1940  
1<sup>st</sup> Photographic (later, 1<sup>st</sup> Mapping; 1<sup>st</sup> Photographic Charting) Group, 10 Jun 1941  
11<sup>th</sup> Photographic Group, 1 Dec 1943  
311<sup>th</sup> Photographic Wing, 5 Oct 1944  
Second Air Force, 10 Nov 1944  
311<sup>th</sup> Reconnaissance Wing, 4 Oct 1945  
Far East Air Forces, 3 Feb 1947  
Thirteenth Air Force, 11 Feb-10 Mar 1947  
6<sup>th</sup> Air Division, 15 Oct 1969  
Thirteenth Air Force 15 Dec 1969  
405<sup>th</sup> Fighter Wing, 20 Apr 1970  
3<sup>rd</sup> Tactical Fighter Wing, 16 Sep 1974  
6200<sup>th</sup> Tactical Fighter Training Group, 1 Jan 1980-30 Oct 1991  
30<sup>th</sup> Launch Group, 1 Dec 2003

## **ATTACHMENTS**

Eighth Air Force, 9 Sep 1945  
United States Army Strategic Air Forces, 4 Oct 1945  
Far East Air Forces, 21 Nov 1945  
VII Bomber Command, 10 Dec 1945  
Eighth Air Force, Mar 1946  
1<sup>st</sup> Air Division, 7 Jun 1946  
5<sup>th</sup> Reconnaissance Group, 11 Feb-10 Mar 1947

## **WEAPON SYSTEMS**

C-8, 1940  
B-10, 1940  
C-45/F-2, 1940 1946-1947  
A-29B, 1941-1942  
RA-29  
P-43A  
A- 20/F-3, 1942  
B-24/F-7, 1942-1945  
B-34, 1942-1944  
B- 25D, 1943  
B-17/F-9, 1943-1944  
B-29/F-13A, 1944-1947

L-4, 1946  
L-5, 1946-1947  
F-4, 1969  
BQM-34A, 1969-1989  
F-15, 1980  
F-16, 1982  
MQM-107D, 1989

### **ASSIGNED AIRCRAFT SERIAL NUMBERS**

RA-29  
41-23340  
41-23388

P-43A  
40-2897

A-29B  
41-23331

B-17F  
42-29783

B-25D  
41-29876

F-7A  
42-73033

F-9A  
42-30256  
42-6184

F-13A  
42-93849  
42-93855  
42-24567  
42-93864  
42-93865

### **ASSIGNED AIRCRAFT TAIL/BASE CODES**

F-4C: DA, PA  
F-4D: DA, PA

### **UNIT COLORS**

## **COMMANDERS**

Maj Donald G. Stitt, 1 Feb 1940  
Maj Minton W. Kaye, 15 Nov 1940  
Cpt Charles P. Hollstein, 10 Jun 1941  
Maj Richard W. Philbrick, May 1942  
Maj Albert M. Welsh, Dec 1942  
Maj Foster S. Randle Jr., Apr 1944  
LTC Albert M. Welsh, 16 Nov 1944  
Maj Foster S. Randle Jr., 10 Oct 1945  
Maj Howard E. Brown, 17 Dec 1945  
Unkn, Jan-Mar 1947  
LTC William E. Powers, 15 Oct 1969  
LTC William R. Martin, 21 Aug 1970  
LTC William J. Watson, 27 Jun 1972  
LTC Don O. Quane, 30 Jun 1973  
LTC Jerry N. Hoblit, 17 Jan 1975  
LTC James R. Alley, 25 Feb 1977  
LTC Charles N. Nielsen, 20 Nov 1978  
LTC Charles H. Holden, 30 Jun 1980  
LTC Roger L. Prather, 21 Jun 1982  
LTC Michael F. Tedesco, 1 Jun 1984  
LTC Willard H. Whitley, Jan 1986  
LTC Robert F. Fischer, Feb 1987  
Unkn, Jan 1988-30 Oct 1991

## **HONORS**

### **Service Streamers**

World War II  
American Theater  
European-African-Middle Eastern Theater  
Asiatic-Pacific Theater

### **Campaign Streamers**

None

### **Armed Forces Expeditionary Streamers**

None

### **Decorations**

Air Force Outstanding Unit Award  
3 Apr-31 May 1975  
1 Jul 1976-30 Jun 1977  
1 Apr 1980-31 Mar 1982  
1 Jul 1985-30 Jun 1987  
1 Jun 1988-1 Jun 1990

Philippine Republic Presidential Unit Citation  
21 Jul-15 Aug 1972

**EMBLEM**

On and over a blue disc bordered in yellow with white clouds issuing from base, a flying brown and white hawk, with yellow feet and beak, wearing an aviator's helmet, focusing a black aerial camera.  
(Approved, 3 Oct 1941)

**MOTTO**

First into the Future

**NICKNAME**

**CALL SIGN**

**OPERATIONS**

1st Air and Space Test Squadron mission is: the developmental test and evaluation for missiles, launch vehicles and payload/launch vehicle integration.

Support launch operations, provide program/customer specific test planning, test program field management, business management, and assistance with range integration, as required to support technology development and prototype booster launches.

Develop processes to support experimental spacelift, research, development test and evaluation space launch systems.

Identify and report payload, launch system, and facility issues that could affect critical path operations or the projected launch date to the Launch Group commander.

Support test and integration functions for experimental space systems, space launch vehicles, targets and interceptors (National and Theater Missile Defense).

Monitor and assess contractor launch processing and integration tasks, identifying risk areas or anomalous events and tracking impacts through closure, current processing schedules, critical path items and the potential risks to maintaining them.

Oversee the operations and maintenance of processing and integration facilities, launch control centers, launch sites, and other launch preparation/execution support facilities.

Evaluate the effectiveness of the contractor in meeting program objectives, identify deficiencies, and recommend changes.

Participate in applicable life-cycle logistics reviews for launch infrastructure system health.

Interact with local offices of Government and contractor agencies concerning ongoing or planned launch site activities (e.g. NASA, NRO, etc.).

Coordinate/review safety, security, and environmental issues as part of launch planning and ensure compliance with local, state, and federal laws as required for developmental aerospace test programs.

Assist in the development and verification of operations requirements, procedures, launch documentation, and other documentation of expected nominal and potentially non-nominal test conditions.

Manage logistics for vehicle and equipment shipments for off-site missions and periodic maintenance/certification.

Perform launch site transportation, handling and emplacement of launch vehicles.

Perform pre/post launch site operations and perform post-operation reviews and develop/maintain lessons learned.

Identify/Report launch system issues that could affect critical path operations or the projected launch date to the Launch Group commander.

The squadron specializes in the reuse of deactivated ICBMs for a variety of new missions, to include space and target launch.

The Minotaur I space launch vehicle uses deactivated Minuteman II first and second stages, along with two stages developed by Orbital Sciences Corporation allowing for a light space-lift vehicle. This vehicle can insert approximately 1,000lbs into low earth orbit.

The Minotaur IV space launch vehicle provides an additional launch solution for U.S. Government sponsored spacecraft. The vehicle, which will provide the core of future responsive space launches, combines three government furnished Peacekeeper solid rocket stages and a commercial solid rocket Orion 38 upper stage from Orbital Sciences Corporation to provide great value and performance. This vehicle can insert approximately 3,800lbs into low earth orbit.

The primary target launch vehicles used by the 1<sup>st</sup> Air and Space Test Squadron are deactivated Minuteman II stages to boost a reentry vehicle payload to a desired point in space. In recent tests, the target vehicle was launched from Vandenberg AFB, with the payload (simulating an enemy warhead) used to test various components of the U.S. missile defense system.

The Missile Defense Agency's Ground-Based Interceptor is the weapon component of the Ground-Based Midcourse Defense system. The Ground-Based Interceptor consists of a multi-stage rocket booster and a kinetic kill vehicle for exoatmospheric interception of ballistic missile warheads. Interceptor test launches require extensive coordination as a target vehicle is launched from Kodiak Launch Complex in Alaska. A short time later, the Ground-Based Interceptor launches from

Vandenberg AFB to accomplish a hit-to-kill intercept of the target vehicle's mock warhead.

The Kinetic Energy Interceptor is a high-speed, three-stage interceptor designed to destroy incoming ballistic missiles during boost, ascent, and midcourse phases of flight. The Kinetic Energy Interceptor consists of a mobile launcher, an interceptor, and a command and control system that is housed in a transportable trailer. It is deployable worldwide using U.S. military aircraft. Initially a land-based defensive capability, with test launches from Vandenberg AFB, Kinetic Energy Interceptor is being designed for transition to sea-based platforms.

Pegasus is very unique Orbital Sciences Corporation vehicle which is air-launched from the bottom of a Lockheed L-1011 at an altitude of approximately 40,000ft. When released from the aircraft, the vehicle free-falls for five seconds, the first stage ignites and the vehicle pitches up. A 45-degree delta wing aids in pitch-up and provides some lift. The vehicle is 57ft long with a maximum payload of approximately 975lbs

Mapped areas of the United States, 1940-1943; Alaska, Canada, Newfoundland, Labrador, and Greenland, 1941-1943; Africa, Middle East, India, and China, 1943-1944; Italy, Sicily, and Sardinia, 1944; and the Far East, 1945-1947.

On 1 May 1943 RB-34 41-38076 was destroyed in a taxiing accident at Bradley Field, CT. Pilot was Louis N Brainerd.

On 14 Jul 1943 B-25D 41-29876 crashed. Charles A. Hamill bailed out due to mechanical failure in Keene, NH

1<sup>st</sup> Test Squadron replaced the 6400th Test Squadron.

1<sup>st</sup> Test Squadron conducted weapons system evaluation, known as COMBAT SAGE, of F-4s from 1969, of F-15s from 1980, and of F-16s from 1982, until shortly before inactivation. Also trained visiting aircrews in weapons employment and tactics.

3/4/2008 Vandenberg Air Force Base may very well be redefining the concept of space lift in the years to come. Part of that is due to the work is done by the 1st Air and Space Test Squadron. 1st ASTS is like none other, literally. The squadron prides itself in being the only unit in the Air Force that carries out its space mission, launching a variety of small spacelift boosters and performing developmental spacelift tests at launch sites across the United States. "We are the only spacelift test unit in the Air Force," 1st Lt. Annette Rivas, a 1st ASTS launch mission manager. "We are a unique squadron, for a unique mission, at a unique base." From reusing decommissioned missiles to launch satellites, to performing launch missions that allow groups like the Missile Defense Agency to test and sustain their Ground-based Missile Defense interceptor program, the 1st ASTS members enable the Air Force to develop the technology needed in today's world to remain a dominant geopolitical

force. "We are currently restoring and reusing the decommissioned Peacekeeper rocket, which was used for ICBM's in the Cold War, to launch satellites," said Lt. Rivas. "It's an incredible way to launch satellites and save the government money." The Peacekeeper was decommissioned at the end of the Cold War as a part of the Strategic Arms Reduction Treaty between the U.S. and the Union of Soviet Socialist Republics. The rocket can no longer be used as an ICBM due to the agreement the

U.S. made with Russia in START II, according to the U.S. Department of State website. When the 1st ASTS is not working at Vandenberg AFB or with the decommissioned Peacekeeper, their efforts may be focused at Wallops Island Flight Facility in Virginia, performing their one-of-a-kind deployable spacelift mission. "We launched a rocket from Wallops this past year that helps with the Missile Defense Agency's space program," said Lieutenant Rivas. The program allows MDA to gather valuable information concerning the tracking of missiles during its phases of powered and ballistic flight. For the launches at Wallops, 1st ASTS personnel are completely "hands on" in the launch effort, with the only blue-suit spacelift maintenance professionals in the Air Force. Squadron members are involved in certifying the rocket is flight-worthy, installing command-destroy hardware required for safe launch operations, and performing ground operations. "At Wallops we drive the loaded transporter up to the pad, and then erect it," said Staff Sergeant Christopher Lanchoney, a 1st ASTS launch operations craftsman. "Then a crane comes and lifts it out of the transporter and on to the pad." These transporters are also unique, a modified version of the equipment used to support the operational Minuteman ICBM force. The mission of the 1st ASTS does not stop at today, but prepares for tomorrow. "Currently we are working, as an Air Force, to figure out how we can quickly maintain our satellites once in space," said Lieutenant Rivas. "Operationally Responsive Space will change today's norm of six months prep for a launch to launching at a moment's notice." Although ORS is still in its beginning stages, the work that the 1st ASTS does will not only continue to help the Airman on the frontlines, but has the potential of changing the way those Airmen fight.





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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.