The 6th Space Warning Squadron's patch significance is as follows:

Principle element: A lighthouse in front of a wavy sea. Two beams emanate from the lighthouse with an ultramarine blue background.

Secondary element: A light blue missile and satellite in orbit, each trapped in a yellow light beam.

The white lighthouse is representative of our searching mission. White is the symbol for perfection and the wisdom to carry out the mission. Two yellow beams signify our day and night operations, water and space coverage, and civilians and military working together. Yellow represents excellence, illumination, and the highest values held by the men and women assigned. The light blue sea signifies loyalty and constancy.

The light blue missile and satellite trapped by the yellow beams represents the main detection mission of the unit.

Ultramarine blue and yellow are the two Air Force colors.

Motto: *Ever Aware*

Mission: We provide accurate and timely missile warning, space control data, and deploy warrior Airmen for the protection of the United States and Allied interests.

Vision: Identify emerging threats through space situational awareness to save the nation.

History of Cape Cod Air Force Station

The 6th Space Warning Squadron has the distinction of being the first Pave PAWS installation in the U.S. A.. "Pave" is a program name for electronics systems. "PAWS" stands for Phased Array Warning System. The technical name for this radar is AN/FPS-123.

On August 27, 1973, the U. S. Air Force directed the construction of two Sea Launched Ballistic Missile (SLBM) Phased Array Radar Systems. On May 23, 1975 it was announced one site would be constructed on the East coast (Otis AFB, MA) and the other on the West coast (Beale AFB, CA). May 23, 1975, the Raytheon Corporation was awarded the contract to build the facility. Construction began on October 26, 1976, on Flatrock Hill, the second highest point on the Cape.

The 6th Missile Warning Squadron and the 2165th Communications Squadron were activated on October 1, 1979. The 2165th was responsible for all communications and electronics maintenance. The facility was originally named Cape Cod Missile Early Warning Station, and became operational on April 4, 1980.

The lease for the land with the Commonwealth of Massachusetts was finalized in 1981. It granted approximately 87 acres for the site, 11.5 acres of access road, and 2 acres for utility lines until the year 2026 (100.5 total acres).

The station's name changed to Cape Cod Air Force Station on January 5, 1982. The 2165th would exist as a tenant unit until 1986, when both squadrons merged into one.

The 6th Space Warning Squadron

Cape Cod Air Force Station

Commander: Col. (sel) Christopher R. Gentry

Cape Cod Air Force Station is home to the 6th Space Warning Squadron (6 SWS), part of the 21st Space Wing at Peterson AFB, Colorado Springs, Colorado.

There are approximately 125 members in **"TEAM 6,"** including active duty U.S. and Canadian Air Force troops, DoD civilians and BAE Systems employees.

The primary mission of the 6 SWS is to provide accurate and timely missile warning and space surveillance data to U.S. and allied decision makers for the safety and security of North America. Cape Cod AFS is the only land-based East coast radar site in the United States with this mission.

The secondary mission is to track Earth-orbiting objects, including high interest items such as the International Space Station and the Space Shuttle, any object that deviates from its known orbit, or any new orbiting objects. Typically, 1,500 satellite objects are tracked daily. This critical tracking information is electronically transmitted to the Joint Space Operations Center Space Situational Awareness Operations Cell at Vandenberg AFB, CA, where it's used to maintain a space catalog of over 30,000 objects, serving an essential role of collision avoidance.

Please feel free to contact Barbara Burnett, Community Liaison, (508) 968-3283, public.affairs@capecod.af.mil , or the Commander's support staff at (508) 968-3277.

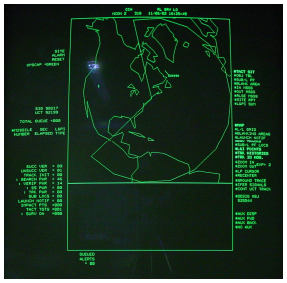
The Radar

The main difference between Pave PAWS and conventional radar is that Pave PAWS is steered electronically. The phased array radar incorporates nearly 3,600 small, active antenna elements coordinated by two computers. One computer is on-line at all times and the second computer automatically takes control if the first fails. The computers feed directions to the antenna units in precise, controlled patterns, allowing the radar to detect and track many objects nearly simultaneously. The Pave PAWS radar can electronically change its point of focus in milliseconds, while conventional dish-shaped radar may take up to a minute to mechanically swing from one area to another.

The Pave PAWS main building is shaped somewhat like a pyramid with a triangular base 105 feet on each side. The two array faces, each containing 1,792 active antenna elements, are tilted back 20 degrees from vertical. Pave PAWS radar beams reach outward for approximately 3,000 nautical miles in a 240-degree sweep. At this extreme range, the radar can detect an object the size of a small automobile. At closer range, smaller objects can be detected.

Why Cape Air Force Station (AFS)?

Upper Cape Cod, being at the highest elevation on the country's easternmost tip, provides an optimal location for missile warning and space surveillance over eastern North America.



Despite the popular notion that the "Cold War" is over, the Russian federation still has more than a thousand intercontinental and sub-launched ballistic missiles in its arsenal. Other nations have developed or are developing missiles with intercontinental ballistic missile range. Throughout the Cold War and today, the ability of the U.S. to quickly detect and identify missile launches has been an effective deterrent. Our series of space-based and ground-based radar systems like Pave PAWS play a critical role in providing unambiguous missile warning to our leaders. Space systems alone cannot provide enough information for our leaders to make sound decisions. They need the additional confirmation—as well as impact prediction—that only ground-systems like Pave PAWS provide.

21st Space Wing

The 6th Space Warning Squadron is operationally assigned to the 21st Space Wing.

The 21st Space Wing is headquartered at Peterson Air Force Base, Colorado. It is the Air Force's most widespread, diverse wing, responsible for providing missile warning and space control to unified commanders and combat forces worldwide. "Team 21" operates 15 weapon systems at 42 units in 27 locations in 5 countries around the world.

The Wing:

Provides early warning of strategic and theater ballistic missile attacks and foreign space launches.

Detects, tracks, and catalogs more than 9,500 manmade objects in space, from near-Earth objects to objects over 22,300 miles above the Earth's surface.

Explores counterspace warfighting technologies in the field.

Hosts Headquarters for North American Aerospace Defense Command (NORAD), HQNORTHCOM, Air Force Space Command, and the 302nd Airlift Wing.

Operates and supports Cheyenne Mountain Air Station; Thule Air Base, Greenland; Cape Cod Air Force Station, Massachusetts; Clear Air Force Station, Alaska; and Cavalier AFS, North Dakota.

Provides community support to the 50th Space Wing, Schriever AFB, Colorado.

Provides community support to the Colorado Springs and Denver, Colorado areas.

BAE SYSTEMS

BAE Systems, Inc. is the U.S. subsidiary of BAE Systems plc, an international company engaged in the development, delivery and support of advanced defense and aerospace systems in the air, on land, at sea and in space.

Headquartered in Rockville, Maryland, BAE Systems, Inc. is responsible for developing BAE Systems' trans-Atlantic businesses, relationships with the U.S. government, administration of BAE Systems' Special Security Agreement and managing its U.S. based operating groups. These operating groups collectively employ some 45,000 employees.

The Integrated Technical Solutions business unit performs operations support and maintenance on high-technology equipment and has supplied logistics and engineering support for 146 radar systems worldwide.

BAE Systems Integrated Technology Solutions was awarded the prime contract to provide operations, maintenance, and logistics support for the Solid State Phased Array Radar System (SSPARS), commencing October 1, 2006. This contract extends to 12 years if all options are exercised.

The five SSPARS Sites are located at Cape Cod Air Force Station, Massachusetts, Clear Air Force Station, Alaska, Beale Air Force Base, California, Fylingdales, United Kingdom and Thule Air Base, Greenland.

This brochure is current as of January 10, 2008.

U.S. AIR FORCE