



**This Week in USAF and PACAF History**  
6 – 12 July 2009



**U.S. AIR FORCE**

7 July 1914 **Dr. Robert H. Goddard received a U.S. patent** for a two-stage solid-fuel rocket. On July 14, the government issued another patent to Goddard for a liquid-fueled rocket design.

Goddard realized that long-range missiles, especially ones that could go into outer space, could not be powered by TNT but required liquid fuels to allow combustion in an airless environment. Eventually he filed patents for everything from gyroscopic guidance systems to fin-stabilized steering. However, Goddard was ridiculed in the U.S. for his theories and his first successful liquid-fueled rocket did not fly until 1926 (photo at right).



In the late 1930s, German rocket engineers asked Goddard technical questions to which he gave casual responses. Goddard’s warnings to the Army about German military rocketry were ignored. By the end of World War II, Goddard had filed more than 200 patent applications, all of which were available for inspection. When a captured German scientist was asked about the origin of the V-2 rocket, he was said to have responded, "Why don't you ask your own Dr. Goddard? He knows better than any of us."

Dr. Goddard died of throat cancer in late 1945. Known later as the “father” of American rocketry, he had 69 patents for his inventions and his designs laid the foundation for U.S. spaceflight. See <http://www.time.com/time/time100/scientist/profile/goddard.html>.



6 July 1937 Colonel M. F. Harmon and 1st Lt. Robert Warren made an **inspection of Hickam Field** from a P-12 aircraft and then landed there. Satisfied with that visit, the Air Corps made plans for the eventual **transfer of other units to Hickam**. The commanding general of the 18th Wing issued an order assigning the 18th Wing Headquarters to Hickam Field.

The photo at left is Hickam Field on 21 July 1937, looking northeast. The original flightline and the first eight hangars are complete. The Pearl Harbor Navy Base was blanked for security reasons.

7 July 1942 Flying a Lockheed Vega A-29 Hudson, Lt Harry J. Kane of the 396 BMS attacked and sank a German submarine (U-701) off Cherry Point, N. C., to make the **first sure “kill” off the Atlantic Coast of the US.**

8 July 1944 Lt. Col. Clifford Heflin flew a C-47 on the **first mission into France to rescue Allied airmen** who had parachuted behind enemy lines.



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11 July 1953 Maj. John F. Bolt, U.S. Marine Corps, flying an F-86 Sabre, became the **first Marine jet ace while on a temporary exchange tour with the 51st Fighter-Interceptor Wing, USAF**. John Bolt was the only Marine and one of only seven Americans to become an ace in both WWII and Korea. In WWII, he flew with 'The Black Sheep', VMF-214, best known for its Commanding Officer, Pappy Boyington. Bolt had six kills in World War II and six more in Korea.

(The photo at right is of John Bolt during World War II.)



11 July 1955 The **Air Force Academy admitted its first class**. The 306 cadets attended classes at the temporary location on Lowry AFB until the Academy could move to its permanent location north of Colorado Springs. Lt. Gen. Hubert R. Harmon was recalled from retirement to become the academy's first superintendent. General Harmon, along with Air Force Chief of Staff Gen. Nathan F. Twining and Secretary of the Air Force Harold Talbott, presided over the three-day celebration that marked the opening of the academy. (See image at left of the first class of cadet candidates in-processing in 1955).

8 July 1960 **Operation NEW TAPE** began after chaos threatened the newly independent Democratic Republic of the Congo in Africa. After evacuating U.S. citizens by air and delivering food, the Air Force began transporting United Nations troops from all over the world to the country. The airlifts continued for four years. Through January 1964, MATS flew 2,128 missions to move 63,798 people and 18,593 tons of cargo.

8 July 1962 **STARFISH PRIME Test**. A Thor rocket launched from Johnston Island carried a 1.4 megaton hydrogen device to an altitude of 250 miles—the highest altitude for a U.S. thermonuclear blast. The detonation occurred about 800 miles from Hawaii at 10:00 PM Hawaiian Standard Time. Because there is almost no air at an altitude of 250 miles, no fireball occurred. However, the sky was illuminated by an artificial aurora for more than seven minutes. The photo at right is from a KC-135 observation aircraft; the photo sequence below was taken from Hawaii on the night of the Starfish Prime Test.





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The electromagnetic pulse (EMP) from this test sent power line surges throughout Oahu, causing the simultaneous failure of 30 strings of streetlights (about one percent of the streetlights in Oahu at the time). Unofficial sources further state that the test blew fuses and circuit breakers, triggered burglar alarms, fused power lines and caused televisions and radios to malfunction. These sources also claim that high-energy electrons from the test became trapped and formed radiation belts that eventually crippled one-third of all satellites in low earth orbit.

12 July 1976 **COPE THUNDER I**, the first of a series of realistic air combat exercises, began at the Clark/Crow Valley range complex in the Philippines. COPE THUNDER was devised as a way to give aircrews their first taste of warfare and quickly grew into PACAF's "premier simulated combat airpower employment exercise." Since most combat losses have historically occurred during an aircrew's first eight to 10 missions, the goal of both RED FLAG in Nevada and COPE THUNDER was to simulate those first missions, increasing the aircrew's chances of survival in real combat.

COPE THUNDER moved to Alaska in 1992 after the Mt. Pinatubo volcanic eruption and the closure of Clark AB. COPE THUNDER was redesignated RED FLAG – Alaska in 2006.



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8 July 1979 **Exercise GLOBAL SHIELD I.** Through 16 July, Strategic Air Command exercised every phase of its Single Integrated Operations Plan (SIOP). The Global Shield



exercise featured full involvement by SAC's active forces and Air Force Reserve units as most bombers, tankers, and missiles were placed on alert. Some aircraft also dispersed to preselected bases, while others flew sorties over radar bomb-scoring sites. On 10 July, SAC launched two Minuteman III intercontinental ballistic missiles from Vandenberg AFB. In the photo at left, six unarmed Minuteman III Mark 12 reentry vehicles from those two ICBMs are shown approaching targets near Kwajalein Atoll in the Western Pacific Ocean.

12 July 1980 The **McDonnell-Douglas KC-10** tanker-cargo aircraft made its first flight.

Doubts about the KC-135 tanker fleet's capability to meet all of the DoD's air refueling requirements arose as the tankers supported both the nuclear alert force and the Vietnam conflict in the 1960s. These doubts were compounded by the attempt to resupply Israel by air during the 1973 Yom Kippur War. In 1977, the DC-10 airframe was selected as a replacement over Boeing's 747, with the addition of a boom control station in the rear of the fuselage and extra fuel tanks below the main deck. The KC-10A had both a centerline refueling boom and a drogue/hose system. Wing-mounted pods for additional refueling stations were added later.

With the KC-10A program, the USAF took advantage of nearly \$2 billion invested by McDonnell Douglas and its subcontractors in development of the DC-10 and of the very large investments by the airlines in establishing a worldwide support system. The result was a huge reduction in both the acquisition price and operating costs of the KC-10A as compared to an all-new military development.

Although the KC-10's primary mission is aerial refueling, it can combine tanker and cargo functions by refueling fighters and simultaneously carrying the fighter support personnel and equipment on overseas deployments.

The aerial refueling capability of the KC-10A nearly doubles the nonstop range of a fully-loaded C-5 strategic transport.

