



U.S. AIR FORCE

This Week in USAF and PACAF History 6 – 12 July 2015



7 July 1914 **Dr. Robert H. Goddard received a U.S. patent** for a two-stage solid-fuel rocket. A week later, the government issued another patent to Goddard for a liquid-fueled rocket design. Goddard eventually filed patents for everything from gyroscopic guidance systems to fin-stabilized steering. Goddard's first successful liquid-fueled rocket did not fly until 1926 (right).

In the late 1930s, German rocket engineers asked Goddard technical questions, but he gave only casual responses. By the end of World War II, Goddard had filed more than 200 patent applications, all of which were available for inspection by anyone, including the Germans. Goddard warned the U.S. Army about German military rocketry, but he was ignored. Captured German scientists, asked about the origin of the V-2 rocket, responded "Why don't you ask your own Dr. Goddard? He knows better than any of us."

Dr. Goddard died of cancer in late 1945 and was subsequently called the **father of American rocketry**.



6 July 1937 Col. Millard F. Harmon and 1st Lt. Robert Warren made an **inspection of Hickam Field** from a P-12 aircraft and then landed on the runway. Satisfied with that visit, the Air Corps planned to transfer air units to Hickam Field, and the commanding general of the 18th Wing established his headquarters there. The photo at left shows Hickam Field on 21 July 1937, looking northeast over the flightline. The Pearl Harbor Naval Base was blanked out for security reasons.

8 July 1944 Lt. Col. Clifford Heflin flew a C-47 on the **first mission into France to retrieve Allied airmen** who had been shot down and parachuted behind enemy lines. See this [website](#) for more on World War II special operations flights in Europe.

6 July 1950 **First strategic air attacks of the Korean War.** Nine B-29s attacked an oil refinery at Wonsan and a chemical plant at Hungnam in North Korea.

6 July 1951 An Air Materiel Command KB-29M tanker, flown by a crew from the 43rd Air Refueling Squadron, conducted the **first in-flight refueling over enemy territory under combat conditions**. The tanker refueled four RF-80s flying reconnaissance missions over North Korea.





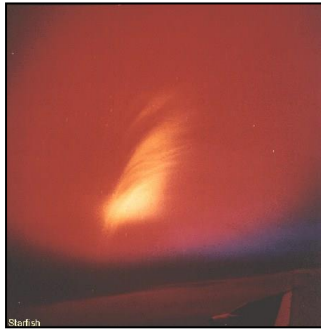
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11 July 1955 The [Air Force Academy](#) **admitted its first class** of 306 cadets. Classes were held at Lowry AFB in Denver while the Academy campus was built north of Colorado Springs.

8 July 1962 **STARFISH PRIME Test.** A Thor rocket launched from Johnston Island carried a 1.4 megaton hydrogen bomb to an altitude of 250 miles—the highest altitude for a U.S. thermonuclear test. The detonation was 800 miles from Hawaii at 10:00 PM local 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 left is from an observation aircraft; the sequence below was taken from Honolulu on the night of the test.



The electromagnetic pulse (EMP) from this test sent power surges throughout Oahu, causing the simultaneous failure of 30 strings of streetlights. Unofficial sources made various claims about the test, including blown fuses and circuit breakers, triggered burglar alarms, fused power lines, television and radio malfunctions, and even the crippling of satellites in low earth orbit.



Below, the STARFISH PRIME detonation as seen from Maui at 10:00 PM on 8 July 1962 – from zero to 15 seconds after detonation (left) and from 45 to 90 seconds after detonation (right).



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 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 had historically occurred



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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 aircrew survival rates 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.

8 July 1979 **Exercise GLOBAL SHIELD I.** Through 16 July, Strategic Air Command exercised every phase of its Single Integrated Operations Plan (SIOP). Global Shield involved both active forces and Air Force Reserve units. Nearly all bombers, tankers, and missiles were placed on alert. Some aircraft dispersed to pre-selected bases, while others flew sorties over bomb-scoring sites. On 10 July, SAC launched two Minuteman III intercontinental ballistic missiles from Vandenberg AFB. At right, six unarmed Minuteman III Mark 12 reentry vehicles from those ICBMs are shown approaching targets near Kwajalein Atoll in the Western Pacific Ocean.



12 July 1980 The [KC-10 Extender](#) tanker-cargo aircraft made its first flight.

During the 1960s, the KC-135 fleet had been strained to meet DoD air refueling requirements which included SAC's bomber force on SIOP alert as well as combat operations in Southeast Asia. The aerial resupply of Israel during the 1973 Yom Kippur War highlighted a further need for air refueling of strategic transports. In 1977, the DC-10 airframe was selected for the new tanker, with modifications that included a boom station in the rear of the fuselage, extra fuel tanks below the main deck, and drogue/hose systems in addition to the centerline boom.

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

The KC-10 was a huge increase in DoD air refueling capabilities. Its fuel capacity of more than 356,000 pounds is nearly twice as much as the KC-135. Refueling from a KC-10 nearly doubles the nonstop range of a fully-loaded C-5.



The KC-10 can combine tanker and cargo missions by refueling fighters while deploying the fighter unit's support personnel and equipment.

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