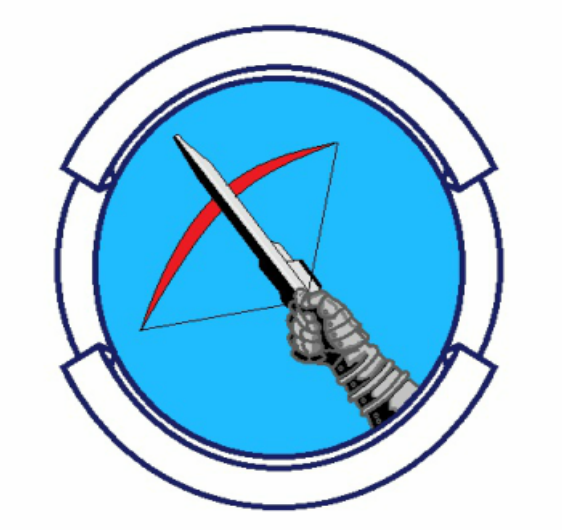
551 STRATEGIC MISSILE SQUADRON



MISSION

LINEAGE
551 Bombardment Squadron (Heavy) constituted, 25 Nov 1942
Activated, 1 Dec 1942
Inactivated, 28 Aug 1945
Redesignated 551 Bombardment Squadron, Very Heavy, 25 Aug 1947
Activated in the reserve, 15 Sep 1947
Inactivated, 27 Jun 1949
Redesignated 551 Strategic Missile Squadron and activated, 24 Oct 1960
Organized, 1 Apr 1961
Inactivated, 25 Jun 1965

STATIONS
Davis-Monthan Field, AZ, 1 Dec 1942
El Paso, TX, 4 Jan 1943
Geiger Field, WA 1 Feb 1943
Great Falls AAB, MT, 11 Mary Jun 1943
Great Ashfield, England, 6 Jul 1943-6 Aug 1945
Sioux Falls AAFld, SD, 14-28 Aug 1945
Selfridge Field, MI, 15 Sep 1947-27 Jun 1949
Lincoln AFB, NE, 1 Apr 1961

ASSIGNMENTS
385 Bombardment Group, 1 Dec 1942-28 Aug 1945
Second Air Force, 15 Sep 1947
Tenth Air Force, 1 Jul 1948
First Air Force, 15 Aug 1948
Tenth Air Force, 1 Dec 1948-27 Jun 1949

Strategic Air Command, 24 Oct 1960
818 Air (later Strategic Aerospace) Division, 1 Apr 1961

WEAPON SYSTEMS
B-17, 1942-1945
Atlas, 1962

COMMANDERS

HONORS
Service Streamers

Campaign Streamers
Air Offensive, Europe
Normandy
Northern France
Rhineland
Ardennes-Alsace
Central Europe
Air Combat, EAME Theater

Armed Forces Expeditionary Streamers

Decorations
Distinguished Unit Citations
Germany, 17 Aug 1943
Zwickau, Germany, 12 May 1944

EMBLEM

551 Bombardment Squadron emblem approved, 4 May 1943.

551 Strategic Missile Squadron emblem: On a sky blue disc edged Air Force blue, bendwise throughout a mailed hand issuing from sinister base, dark gray, shaded black, highlights white, grasping a drawn bow red, with arrow white, shaded black, the taut string black. **SIGNIFICANCE:** The emblem is symbolic of the squadron and its mission. The missile is the weapon system used by the unit as part of SAC's deterrent force. The drawn bow symbolizes the potential instantaneous release of destruction against an aggressor. This state of preparedness is maintained by the squadron. The mailed hand illustrates the firm human controlling agent of the force. The background represents space, the medium in which the missile force operates. (Approved, 20 Jun 1962)

MOTTO
STRENGTH MAINTAINS SECURITY

OPERATIONS
Combat in ETO, 17 Jul 1943-20 Apr 1945.

The last Series F Atlas ICBM (and the last Atlas and the last first-generation liquid-fuel ICBM) to leave a SAC operational base was shipped from the 551 Strategic Missile Squadron, Lincoln AFB, Nebraska, to storage facilities for future use as launch vehicles in various research and development programs. This completed the phaseout of SAC's first generation of ICBMs. 20 APR 1965

Headquarters SAC inactivated the last remaining Atlas ICBM squadrons, the 567th Strategic Missile Squadron (ICBM-Atlas E) at Fairchild AFB, Washington, the 550th Strategic Missile Squadron (ICBM-Atlas F) at Schilling AFB, Kansas, the 551 Strategic Missile Squadron (ICBM-Atlas F) at Lincoln AFB, Nebraska, and the 556th Strategic Missile Squadron (ICBM-Atlas F) at Plattsburgh AFB, New York. 25 JUN 1965

The last Series F Atlas ICBMs were removed from alert at the 551 Strategic Missile Squadron, Lincoln AFB, Nebraska. This completed the operational phaseout of this model of the Atlas ICBM weapon system. 12 APR 1965

Assigned to maintain and operate part of America's first generation Intercontinental Ballistic Missile family, the 551 Strategic Missile Squadron stood on constant guard and readiness in Eastern Nebraska against the Soviet threat.

Before the launch of the Soviet Sputnik satellite in October 1957, America's ICBM development had been slow for several years. In 1955 the Atlas (and later Titan) missile systems were given the go ahead for rapid development. During 1957, an early Atlas missile was successfully test launched in California. Refinements continued until 1959 when the first pair of Atlas missiles

were designated alert-ready on pads at Vandenburg Air Force Base in California. From then on, American ICBM forces would stand on alert.

The first actively deployed Atlas missiles were the Atlas-D and Atlas-E variants. Atlas-D was placed in an above ground concrete building in a three-missile complex. The "D" version was also radio-guided meaning a constant communication between itself and its launch site was essential to successfully strike its distant target. "D" missiles were deployed among other bases at Offutt in Bellevue, Nebraska. Three complexes at Missouri Valley, Iowa, Arlington, Nebraska and Mead, Nebraska were constructed.

Atlas-D quickly became obsolete as the system was susceptible to radio jamming and the launch sites were poorly armored against nuclear attack. Atlas-E improved guidance with an internal system, meaning once launched it could locate its own target within a mile. Atlas-E sites were individual instead of in complexes and better protected. Placed in semi-buried launchers, the sites could sustain 25 p.s.i. blast pressures from a bomb burst and survive.

The last missile in the series was the Atlas-F. The "F" was essentially an "E" as it also had internal guidance. What set it apart was its placement in hardened underground silo launchers. From that point after, all American ICBMs were sunk into underground silos to maximize survivability in the nuclear environment. An Atlas-F silo could survive 100 p.s.i. of blast pressure which made it much better protected than its predecessors.

In 1959 the Air Force designated that Lincoln would become a missile base yet it was unknown if these would be Atlas or the newer and longer-ranged Titan missiles. An initial construction contract called for 9 silos to be constructed (Atlas-E missiles were grouped in 9 per squadron). Later three more silos were added for a grand total of 12, which would become the standard of the Atlas-F system

Throughout 1959 to 1962, silo construction at sites near Eagle, Elmwood, Avoca, Nebraska City, Palmyra, Tecumseh, Beatrice, Cortland, Wilber, Seward, York and Brainard. At peak work, 1900 workers built the silos at a 24/7 pace due to the international tension at the time.

1960 also saw the start of missile silo construction at Lincoln with word that the base would operate Atlas ICBMs soon. 12 silos were placed near Eagle, Elmwood, Avoca, Nebraska City, Palmyra, Tecumseh, Cortland, Beatrice, Wilber, York, Seward and Brainard. After a difficult construction the sites were soon operational in late 1962 under the 551 Strategic Missile Squadron. The massive ICBM contained a 3 megaton warhead and had the range to strike targets in the Soviet Union. A five man crew watched over the missile for many hours at a time, waiting for the call to raise the missile out of its protective silo and to launch it at a predetermined target.

In June 1962 construction finally ended and Atlas-F missiles were shipped from their construction plants and quickly sunk into the ground. By the Cuban Missile Crisis of October 1962, most of Lincoln's Atlas-F missiles were operational. In order to keep up with the crisis,

members of the 551 pulled long two-day shifts due to the limited number of crews trained on the system.

The 551 began operations out of a small building on the west edge of the base until moving to building #310, better known as the Missile Assembly and Maintenance Shop. Here a large bay for missile maintenance was constructed and crews were trained in operating the system. In addition, the 551's administrative assets operated from this building and crews stopped here to be briefed before going to their sites.

The silos themselves were and are intricate complexes. Due to the large size of the Atlas missile, the silo itself stretched 10 stories down into the earth. The crew itself consisted of 5 individuals, a missile combat crew commander, a deputy missile combat crew commander, a ballistic missile analysis technician, a missile facility technician and an electric power production technician. These 5 men ran 24 hour shifts and performed a variety of duties while on site. In addition, two guards remained on the surface to protect the site against sabotage or trespassers.

The crew regularly had to work "up close and personal" with the missile itself in its silo. As it was a first-generation missile and also liquid-fueled, the missile was extremely volatile. With its kerosene fuel and extremely dangerous liquid oxygen load, crews had to be extremely careful around the missile while working. In addition the missile had a thickness of only a dime in some places in order to save on weight (to extend range).

In a combat situation or a training exercise. The missile was fueled with its liquid oxygen load and raised to the surface. Within 15 to 20 minutes the missile could be fired and on its way to a target in the Soviet Union or China.

By 1964, with the advent of second generation missiles such as the Minuteman, the early and somewhat dangerous Atlas missile was obsolete. Minuteman was a solid-fueled missile requiring less care than Atlas and could be launched in a matter of a few minutes. By the end, 72 Atlas-F missiles were deployed across the country. Eventually 1,000 Minuteman missiles were to be deployed across the upper plains and Missouri.

In 1964, Atlas-D missiles were being deactivated (including those at Offutt). By 1965 all first generation missiles were being taken out of service. The last Atlas-F missile on alert stood at a site near Lincoln Air Force Base in April 1965. By June the missiles were but a memory and the 551 Strategic Missile Squadron was deactivated.

Turnover to SAC, 15 Sep 1962
Operational, 15 Sep 1962
First ICBM off alert, 10 Mar 1965
Last ICBM off alert, 12 Apr 1965
Last ICBM shipped, 20 Apr 1965

USAF Unit Histories
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Sources
Air Force Historical Research Agency. U.S. Air Force. Maxwell AFB, AL.