# THE AIR FORCE AND THE COLD WAR

## A PICTORIAL HISTORY

AIR FORCE ASSOCIATION

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DECEMBER 2005

**By John T. Correll**

After 20 years of service in the US Air Force, John Correll joined the staff of *Air Force* Magazine, journal of the Air Force Association, in 1982. He was editor in chief from 1984 to 2002. He continues to study and write about national defense and air and space power.

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# THE 40 –YEAR WAR

**The Air Force and the Cold War had a strong influence on each other.**

*A SAC pilot and a member of the ground crew in the 1950s confer about the status of their airplane. Back then, "wheel hats" were everyday wear.*

*Nearly all of the Air Force's operational aircraft assembled at the Air Proving Ground Command at Eglin AFB, Fla., for a "family portrait" in the 1950s. In the center of the two concentric circles is the H-19 helicopter. In front of it is the T-37 jet trainer. To the viewer's left of the T-37 is the F-86D Sabre interceptor. Continuing clockwise around the inner circle are the F-94C Starfire jet interceptor, the RC-121 Super Constellation reconnaissance aircraft, the KC-97 tanker, the F-84F jet fighter, and the F-86 Sabre jet fighter. Clockwise around the outer circle, starting from the lower center of the picture, are the F-102 delta-wing interceptor, the F-100 Super Sabre fighter, the B-57 bomber, the B-66 bomber, the B-47 bomber, the KC-135 tanker, the B-52 bomber, the B-36 bomber, the C-124 transport, the KB-50 tanker, the C-130 tactical airlifter, the SA-16 rescue amphibian, the F-89D Scorpion interceptor, and the RF-101 Voodoo reconnaissance aircraft.*

The interval of peace that followed World War II was short.

As soon as the fighting ended, the United States began discharging troops at the rate of 100,000 a week. Between August 1945 and June 1946, the Army Air Forces deactivated 68,000 airplanes. Most of them were cut up for scrap.

Some American forces remained overseas, but that was understood to be a temporary arrangement. US occupation forces expected to be out of Germany in two years.

However, these postwar plans had not counted on a challenge from our wartime ally, the Soviet Union. The Red Army was on the Elbe, in possession of eastern Europe and much of Germany. Never before in their history had the Russians held a position of such opportunity.

At Yalta in February 1945, Russian dictator Joseph Stalin promised freedom for the nations of liberated Europe. In reality, the Russians had no intention of going home. Their plan was to covert the territory they had overrun into a buffer zone to shield the Soviet Union from invasion.

*The March 1952 cover of Air Force Magazine imagined Stalin chortling over a cutback in plans for airpower. In 1953, the "New Look" strategy put greater reliance on airpower and increased the funding.*

In a speech at Fulton, Mo., in 1946 Britain's wartime leader, Winston Churchill, declared that, "From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the Continent."

The only nation strong enough to contend with the Soviet Union was the United States. US forces would not be going home after all.

Thus began the long struggle known as the "Cold War." The term was first used by senior statesman Bernard Baruch in a speech, but it was columnist Walter Lippman who picked it up and made it a lasting addition to the language.

The US Air Force and the Cold War both had their beginnings in the 1940s. Over the next 40 years, they had a strong influence on each other. The Air Force was shaped by Cold War requirements. Cold War strategy evolved in considerable part on the basis of what airpower made possible.

The atomic bomb was central to military power in the Cold War. It was essentially an air weapon, and the Air Force, the newest of the military

*A Minuteman missile launches from Vandenberg AFB, Calif., in a periodic test of system reliability. The missiles were selected at random from those deployed in the field, pulled out of their silos, and brought to Vandenberg for testing.*

services, was thrust into a position as the nation's first line of defense.

In the early part of the Cold War, the bomb could be delivered only by long-range bombers, the B-29 and the B-36 at first, then by the jet-powered B-47 and the B-52.

Eventually, strategic nuclear deterrence was vested in a triad of forces: Air Force bombers, Air Force ICBMs, and Navy submarine-launched ballistic missiles.

The Soviet Union tested its own atomic bomb in 1949. The threat of atomic attack seemed very real and very immediate to the American public. Ground Observer Corps volunteers scanned the sky with binoculars, and Air Defense Command interceptors stood constant alert.

The United States generally followed a doctrine of "Containment," first formulated by State Department Sovietologist George Kennan in 1947. We would meet global Communism wherever it threatened and keep it from spreading. Containment was successful in Europe but not in Asia, where Communism flourished in China, Vietnam, and other places.

In addition to the balance of strategic nuclear power, the Cold War also encompassed other situations and events, including the Berlin Airlift, the Cuban Missile Crisis, and two regional

*The B-47, first of the jet bombers, was an awesome development. It was faster than most fighters at operational altitude, and in-flight refueling gave it global range.*

*Air Force F-4s intercept a Soviet Bear F ASW near Iceland, a NATO member, in the 1980s. Earlier generations of Air Force interceptors—notably F-102s and F-106s—intercepted earlier generations of Bears in the constant testing and response of air defenses.*

wars—in Korea and Vietnam—that occurred in the shadow of the US-Soviet nuclear confrontation.

The closest the Cold War came to having a front line was in Europe, where NATO was ultimately squared off against a force in place of 132 Soviet-Warsaw Pact divisions, 32,000 tanks, and about 6,000 combat aircraft.

In some instances, Cold War fears turned out to be exaggerated. That was the case with the supposed "missile gap" of the 1950s. The Soviet Union was first to test launch an ICBM and first to put a satellite in space. It was not until Air Force photoreconnaissance satellites in the 1960s brought back hard evidence that the "missile gap" was determined to be in our favor.

In other—and more significant—instances, the Cold War threat was underestimated. In the 1960s. US decision makers abandoned the objective of strategic superiority and aimed instead for parity with the Soviet Union. The CIA—disputed by the Air Force—forecast that the Soviets would not try to seek to match or exceed US strategic capabilities. The Soviets kept building and surpassed the United States in ICBMs. They improved their force steadily through the 1960s and the era of "Detente" in the 1970s.

There were strong political pressures in this country opposed to improving or adding to the US strategic force. Liberals in political, academic, and media communities argued angrily that the Soviets did not have and did not seek a nuclear advantage. Both strategic and conventional US forces were reduced. The situation bottomed out with the "hollow force" of the late 1970s.

(Years later, former Soviet leader Mikhail Gorbachev confirmed that the Soviet Union had indeed been seeking "military supremacy relative to any possible opponent" and continued its efforts "even after achieving military and strategic parity with the United States of America.")

Through the period of difficulty, the security of the United States and its allies rested to considerable extent on the mutually-reinforcing capabilities of the Strategic Triad. Bombers, ICBMs, and submarine-launched ballistic missiles each had their own strengths and weaknesses. This made it almost impossible for an enemy attack to succeed. If the Soviets decided to attack our ICBM sites, they would have to use their ICBMs, which were the only weapons that could do the job. However, the flight time of Soviet ICBMs would allow US bombers time to get airborne and survive to strike back.

Detente came to a halt in the 1980s, when the United States rearmed its force and challenged the Soviet Union, which had been steadily building up in a time supposedly characterized by arms control and restraint.

The "requirements push" of the Cold War led to a so-called Revolution in Military Affairs in the United States, producing such capabilities as stealth, long-range precision strike, and new levels of information technology.

A great many people dismissed the US Strategic Defense Initiative, dubbed "Star Wars," as ineffective, but the Russians took it seriously. On the off chance the US gained a capability to defend against ballistic missiles, much of the Soviet military power would become obsolete.

The Soviet Union was a mighty force, but it was spending up to 30 percent of its gross national product for military purposes and it held its allies only by strength of arms.

With its economy tottering and its vast military program no longer affordable, the Soviet Union introduced economic and political reforms. The idea of reform was wildly popular and went far beyond anything the leaders had intended. However, there was no turning back.

The Warsaw Pact collapsed in July 1991 and the Soviet Union was not far behind. ■

# THE AIR FO

*An Air Policeman—as they were known in the 1950s—stands guard on a Cold War flight line. The weapon looks to be an M-1 carbine.*

By John T. Con

# RCE AND THE COLD WAR:

## A Chronology, 1945-91

**Here are the key events of a world conflict that shaped, and was shaped by, the Air Force.**

*Various dates are given for the beginning and end of the Cold War. By some accounts, it started in 1939, when the Soviet Union annexed the Baltic states. NATO, in its "London Declaration," proclaimed the Cold War over in July 1990, but nobody paid any attention. For its part, the Department of Defense awards its Cold War recognition certificate to veterans who served between Sept. 2, 1945 (when the Japanese surrender to end World War II) through Dec. 26, 1991 (when the Soviet Union ceased to exist).*

### 1945-49: Challenge and Containment

Staff map by Zaur Eylanbekov

*In 1948, when the Soviets blockaded the ground routes into Berlin, three air corridors, each 20 miles wide, remained open. The flags indicate the American, British, French, and Soviet occupied sectors.*

**May 8, 1945.** Nazi Germany surrenders. Soviet Red Army holds Eastern Europe, Balkans, and eastern Germany.

**March 5, 1946.** Churchill says an "Iron Curtain" has descended in Europe.

**March 12, 1947.** "Truman Doctrine" declares US support for Greece and Turkey to fight communist insurgency.

**June 5, 1947.** Marshall Plan for recovery of Europe announced.

**July 1947.** "Containment" concept elaborated by George Kennan in Foreign Affairs "X" article.

**Sept. 18, 1947.** The US Air Force becomes a separate service.

**1947-48.** Soviet Union converts East European nations into subservient communist states.

**June 26, 1948.** Berlin Airlift begins; it ends on Sept. 30, 1949.

**June 26, 1948.** Air Force receives first operational B-36 bombers.

**Feb. 26-March 2, 1949.** B-50 Lucky Lady II makes first nonstop flight around the world.

**April 4, 1949.** North Atlantic Treaty Organization created.

**May 23, 1949.** Federal Republic of Germany (West Germany) established.

**Aug. 29, 1949.** The Soviet Union explodes its first atomic bomb.

**Oct. 1, 1949.** Mao Zedong takes power, establishing the People's Republic of China.

**Oct. 7, 1949.** Communist-ruled German Democratic Republic (East Germany) established.

**Jan. 31, 1950.** Truman orders development of the hydrogen bomb.

**Feb. 14, 1950.** Soviet Union and China sign treaty of alliance and mutual assistance.

**March 15, 1950.** Joint Chiefs of Staff give the Air Force formal responsibility for development of strategic guided missiles.

**April 14, 1950.** NSC-68, "blueprint for the Cold War," prescribes US rearmament and containment of Soviet expansionism.

**June 25, 1950.** Korean War begins with communist invasion of South Korea.

**Oct. 25, 1950.** Red Chinese forces enter the Korean War.

**Jan. 1, 1951**. Air Defense Command, previously abolished, is restored to full status as a major air command.

**July 14, 1952.** The Ground Observer Corps begins its round-the-clock skywatch.

**Oct. 3, 1952.** Britain tests its first atomic bomb.

**Oct. 31, 1952.** The United States tests its first thermonuclear device.

**Dec. 9, 1952.** NATO adopts strategy 14/1, which bases the defense of Europe on use of US nuclear weapons.

**June 5, 1953.** B-47 bomber achieves initial operational capability.

**July 27, 1953.** UN and North Korea sign armistice agreement, producing cease-fire in Korea.

**Aug. 12, 1953.** Soviet Union explodes a thermonuclear device.

**Oct. 30, 1953.** NSC 162-2 inaugurates the "New Look" strategy.

**Jan. 12, 1954.** Secretary of State John Foster Dulles makes "massive retaliation" speech.

**April 7, 1954.** Eisenhower formulates the "Domino Theory."

**May 1, 1955.** Warsaw Pact created.

**May 5, 1955.** West Germany joins NATO.

**June 19, 1955.** B-52 bomber achieves initial operational capability.

*Secretary of State John Foster Dulles makes "massive retaliation" speech in 1954.*

**July 21, 1955.** Eisenhower proposes "Open Skies." Soviet Union refuses.

**Nov. 26, 1955.** Pentagon gives Air Force operational control of ICBMs and all land-based missiles with range greater than 200 miles.

**Jan. 17, 1956.** DOD reveals the existence of SAGE, an electronic air defense system.

**July 4, 1956.** CIA U-2 reconnaissance aircraft makes first overflight of Soviet Union.

**Oct. 23-Nov. 10, 1956.** Hungarian Revolution crushed by Soviet troops.

**Nov. 18, 1956.** Khrushchev tells West, "We will bury you."

**May 23, 1957.** NATO adopts strategy 14/2, "Massive Retaliation."

**June 11, 1957.** SAC receives first Air Force U-2 reconnaissance aircraft.

**June 28, 1957.** SAC receives first KC-135 jet-powered tankers.

**July 31, 1957.** The Distant Early Warning (DEW) Line is reported to be fully operational.

**Aug. 1, 1957.** US and Canada form North American Air Defense Command.

**Aug. 21, 1957.** Soviet Union test-launches world's first ICBM.

**Oct. 4, 1957.** Soviet Union puts Sputnik, the world's first artificial satellite, into Earth orbit.

**Dec. 6, 1957.** The first US attempt to orbit a satellite fails when a Vanguard rocket loses thrust and explodes.

**Dec. 17, 1957.** First successful US launch and test flight of an ICBM, an Air Force Atlas.

**Jan. 31, 1958.** US finally places a satellite in orbit with Explorer I.

**July 15, 1958.** First major deployment (to Lebanon) of Composite Air Strike Force.

**Sept. 9, 1959.** Atlas missile declared operational by CinCSAC.

*The US responded quickly to the invasion of South Korea in 1950, believing it was the beginning of a global communist offensive. USAF F-86 Sabres performed with special distinction.*

**Feb. 3, 1960.** France tests its first atomic bomb.

**May 1, 1960.** CIA U-2 reconnaissance aircraft is shot down over the Soviet Union.

**July 20, 1960.** First flight of Polaris, the first US submarine launched ballistic missile.

**Aug. 10, 1960.** First successful flight of Air Force/CIA Corona, the first US photoreconnaissance satellite.

**Aug. 17, 1960.** Joint Strategic Target Planning Staff created to coordinate targeting of Air Force ICBMs and Navy SLBMs.

**Jan. 6, 1961**. Khrushchev declares support for "wars of national liberation."

**Feb. 1, 1961.** Ballistic Missile Early Warning System operational.

**Feb. 3, 1961.** SAC's EC-135 Airborne Command Post "Looking Glass" begins operations.

**April 12, 1961.** Soviet cosmonaut Yuri Gagarin makes the first manned spaceflight.

**April 17, 1961.** CIA-supported Bay of Pigs invasion of Cuba fails.

**July 1961.** Fifty percent of SAC's bombers and tankers maintain 15-minute ground alert.

**Aug. 13, 1961.** Construction of Berlin Wall begins.

**Sept. 6, 1961.** National Reconnaissance Office created to operate intelligence satellites.

**Oct. 26, 1961.** US and Soviet tanks confront each other at Checkpoint Charlie in Berlin.

**Nov. 16, 1961.** Air Force's Operation Farm Gate commandos arrive in Vietnam.

*An F-4 lands at a base in South Vietnam under the watchful eyes of a security policeman and his dog. The theory was that if Vietnam fell to the communists, the other nations of Southeast Asia would also fall "like a row of dominoes."*

*After the Cuban Missile Crisis ended in 1962, President Kennedy met at the White House with the Air Force team responsible for discovering the missiles. Nearest the President is Gen. Curtis LeMay, Air Force Chief of Staff. Maj. Richard Heyser, the U-2 pilot who found the missiles, is next to LeMay. At left are Col. Ralph Steakley and Lt. Col. Joe O'Brady. Standing in the background is Brig. Gen. Godfrey McHugh, the President's Air Force aide.*

**June 16, 1962.** Secretary of Defense Robert S. McNamara publicly announces "No Cities/Counterforce" nuclear targeting doctrine.

**Oct. 14, 1962.** Air Force U-2 obtains photographic evidence of Soviet ballistic missile sites in Cuba.

**Oct. 27, 1962.** First 10 Air Force Minuteman ICBMs go on alert.

**Oct. 28, 1962.** USSR agrees to remove missiles from Cuba, ending Cuban Missile Crisis.

**Aug. 5, 1963.** Limited Test Ban Treaty signed by US, Great Britain, and Soviet Union.

**Aug. 30, 1963.** US and Soviet Union install round-the-clock teletype hotline between the Pentagon and the Kremlin.

**April 21, 1964.** The number of US ICBMs on alert pulls even with the number of bombers on alert.

**Oct. 15, 1964.** Khrushchev deposed, succeeded by Leonid Brezhnev.

**Oct. 16, 1964.** Chinese explode a nuclear device.

**Dec. 22, 1964.** First flight of the SR-71 Blackbird strategic reconnaissance aircraft.

**Jan. 1, 1965.** Air Force activates first SR-71 wing.

**Feb. 18, 1965.** McNamara announces change of strategy from "No Cities" to "Assured Destruction."

**March 2, 1965.** Sustained air operations against North Vietnam begin.

**May 1965.** C-141A Starlifter, USAF's first jet-powered transport, reaches initial operational capability.

**March 10, 1966.** France withdraws its armed forces from NATO.

**Jan. 12, 1968.** The Air Force announces a system for tactical units to carry with them everything they need to operate at "bare" bases equipped only with runways, taxiways, parking areas, and a water supply.

## 1960s: Superpower Standoff (cont.)

**Jan. 16, 1968.** NATO adopts strategy 14/3, "Flexible Response," replacing Massive Retaliation.

**Aug. 20, 1968.** Soviet and Warsaw Pact armed forces stamp out "Prague Spring" political liberalization movement in Czechoslovakia.

**Nov. 12, 1968.** Brezhnev Doctrine: Soviet satellites must conform to Soviet direction.

**March 2-Aug. 13, 1969.** Soviet and Chinese forces clash along border in Asia.

**June 24, 1969.** NSDM-16 calls for "Strategic Sufficiency."

**July 20, 1969.** US astronauts make first lunar landing.

*Cuban President Fidel Castro and Soviet Premier Nikita Khrushchev share a hug at the UN in 1960.*

## 1970s: Detente in a Dangerous Decade

*President Richard Nixon with National Security Advisor Henry Kissinger.*

**July 30, 1970.** Israeli Air Force shoots down five MiGs flown by Soviet pilots in Middle East "War of Attrition."

**September 1970.** C-5 airlifter achieves initial operational capability.

**Dec. 16, 1970.** SAC receives first FB-111s.

**Dec. 30, 1970.** First squadron of Minuteman III missiles (with multiple warheads) becomes operational.

**Feb. 21-28, 1972.** President Nixon visits China.

**May 26, 1972.** SALT I and ABM treaties signed.

**Aug. 15, 1973.** Air Force aircraft fly their last combat missions of Vietnam War.

**Oct. 12-Nov. 14, 1973.** US Nickel Grass airlift resupplies Israel in the Yom Kippur War.

**March 4, 1974.** Secretary of Defense James R. Schlesinger announces "Limited Nuclear Options" strategy.

**April 30, 1975.** Saigon falls to North Vietnamese forces.

**June 30, 1977.** President Carter cancels B-1 bomber program.

**Dec. 16, 1978.** US and China establish diplomatic relations. US transfers recognition from Taipei to Beijing.

**June 18, 1979.** SALT II treaty signed.

**Dec. 27, 1979.** Soviet forces invade Afghanistan and overthrow the government.

## 1980s: Confronting the Evil Empire

**Jan. 3, 1980.** Carter withdraws SALT II treaty from Senate consideration because of Soviet invasion of Afghanistan.

**March 31, 1980.** Air Defense Command inactivated.

**July 25, 1980.** Presidential Directive 59 establishes "Countervailing" strategy.

**Aug. 22, 1980.** Department of Defense reveals existence of stealth technology.

**June 18, 1981.** First (and secret) flight of the F-117A stealth fighter.

**Oct. 2, 1981.** President Reagan reinstates the B-1 bomber program.

**July 1, 1982.** US Air Force activates first ground launched cruise missile (GLCM) wing at RAF Greenham Common in England.

## 1980s: Confronting the Evil Empire (cont.)

*Two Cold War icons: British Prime Minister Margaret Thatcher and US Defense Secratary Caspar Weinberger.*

**Sept. 1, 1982.** Air Force Space Command is established.

**December 1982.** Air launched cruise missile reaches initial operational capability.

**Jan. 17, 1983.** NSDD-75 calls for rollback of Soviet power and expansionism.

**March 8, 1983.** Reagan delivers "Evil Empire" speech.

**March 23, 1983.** Reagan delivers "Star Wars" speech.

**Sept. 1, 1983.** Soviet Union shoots down Korean Airlines flight 007.

**Oct. 10, 1985.** The Peacekeeper ICBM reaches initial operational capability.

**April 15, 1986.** In Operation El Dorado Canyon, US Air Force F-111s take off in England, refuel in air six times, strike targets in Libya, return to base in England.

**October 1986.** Reagan holds to Strategic Defense Initiative at Reykjavik summit.

**Oct. 1, 1986.** B-1B bomber achieves initial operational capability.

**May 5, 1987.** The last Titan II ICBM is taken off strategic alert.

**June 12, 1987.** Reagan delivers "Tear down this wall" speech in Berlin.

**Dec. 8, 1987.** US and USSR sign Intermediate-Range Nuclear Forces (INF) treaty.

**Dec. 7, 1988.** Gorbachev reverses Brezhnev Doctrine.

**July 17, 1989.** First flight of the B-2A bomber.

**Nov. 10, 1989.** Fall of the Berlin Wall.

*To counter the SS-20 missiles introduced into Europe by the Soviet Union, NATO deployed the US Air Force Ground-Launched Cruise Missile (shown here) and the US Army Pershing II. Critics in the United States and Europe, who had passively watched the deployment of the SS-20s, erupted in outrage. Eventually, both sides withdrew their intermediate-range missiles.*

## 1990-91: Fall of the Soviet Union

**July 24, 1990.** SAC ends more than 29 years of continuous Looking Glass airborne alert missions.

**Aug. 2, 1990.** Iraq invades Kuwait.

**Oct. 3, 1990.** East and West Germany reunify.

**Nov. 17, 1990.** Conventional Forces in Europe (CFE) treaty signed.

**Jan. 17, 1991.** Operation Desert Storm begins; ends with Iraqi surrender Feb. 28.

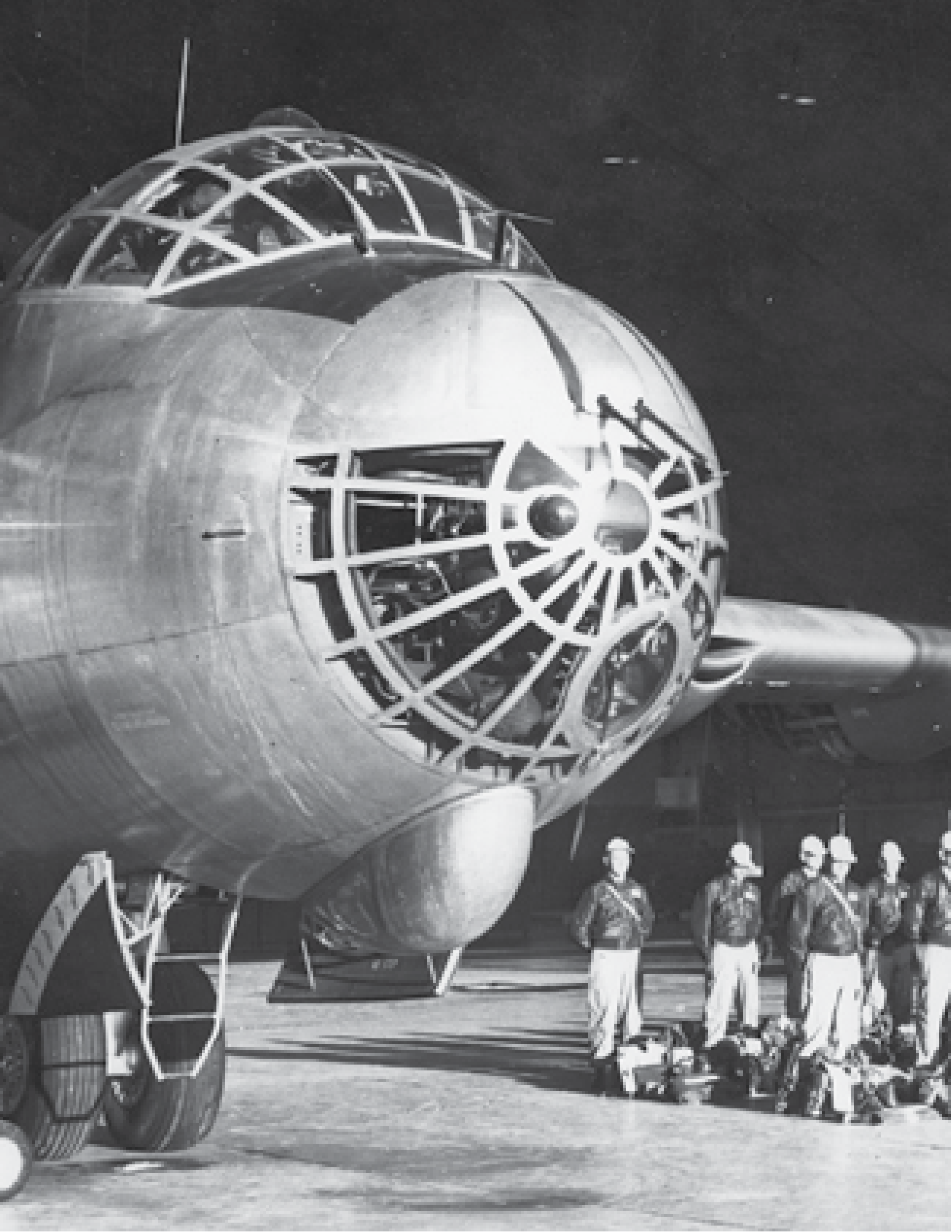
**July 1, 1991.** Warsaw Pact formally disbands.

**July 31, 1991.** US and USSR sign START agreement.

**Aug. 19, 1991.** Communist hardliners attempt coup in Moscow. It fails Aug. 21.

**Sept. 27, 1991.** US strategic bomber crews stand down from round-the-clock alert.

**Dec. 26, 1991.** The Soviet Union ceases to exist.



# COLD WAR PHOTO GALLERY

*SAC B-36 aircraft commander at Ellsworth AFB, S.D., inspects his crew prior to a long-range training mission.*

*The Composite Air Strike Force, a self-contained tactical air package that deployed to contingencies in any part of the world. In this 1958 photo of the CASF in the air, a KB-50 tanker leads the parade. Refueling are an F-100 Super Sabre (foreground), a B-66 tactical bomber (tail position), and an F-101 Voodoo (on the far wing). Flanking the formation are C-130 transports that carried personnel and flyaway kits to maintain the force during the deployment.*

*Two F-80s (below) use jet assisted takeoff (JATO) for mission over Korea.*

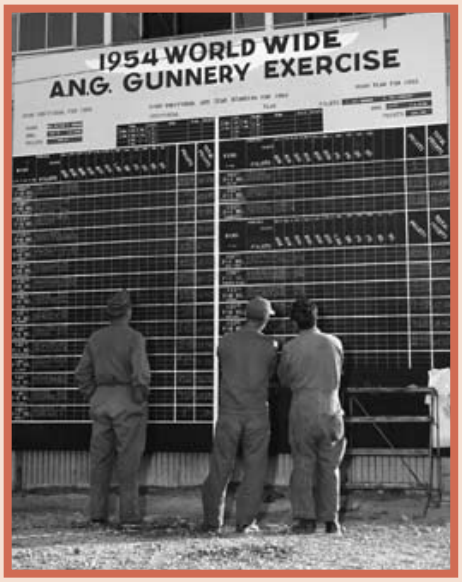
*An airman aboard a "Texas Tower" off Cape Cod in 1956 plots the position and track of an aircraft detected at sea. Texas Towers—so named for their resemblance to oil drilling platforms—were offshore radar stations that watched for the approach of Soviet bombers. The location of these sites, in relatively shallow waters along the US coastline, would have added a few minutes to the warning time of an attack, perhaps enough for interceptors to stop the bombers while they were still offshore.*

*In August 1952, more than 3,700 Muslim pilgrims (below) were stranded en route to Mecca because of insufficient commercial transport. The Air Force picked them up in Beirut and took them the rest of the way on their pilgrimage.*

*USAF air commando 1st Lt. Gerald Hamilla (above) provides a preflight orientation for a South Vietnam airman.*

*At left, an HH-43 Huskie rescue helicopter.*

*Below, Capt. John Croston (left), pilot, and A2C Charles Thompson, flight engineer, do preflight check in 3rd Bomb Wing B-26 in Korea.*



*Airmen check the scoreboard during Air National Guard gunnery meet.*

*An Air Force C-119 plucks a descending mission capsule from a Corona satellite out of the air. Capsules were intended to be caught when re-entering the atmosphere, but the recovery aircraft missed on the first successful Corona effort in August 1960, and the payload had to be fished out of the ocean.*

*At left, Air Policeman A3C Daniel Dutzman, 4th Fighter-Interceptor Wing, Kimpo AB, South Korea, walks his post with his K-9 partner, keeping watch over F-86s. Inset: F-86s of the 44th Fighter-Bomber Squadron fly over the Philippines.*

*Below, Air National Guardsmen scramble toward their F-86s.*

*USAF armament technicians in South Vietnam prepare 250-pound bombs for an A-1E in the background.*

*At left, the main attraction at the Air Force Association's National Air Fair in Chicago in 1949 was the B-36, then the biggest aircraft in the world.*

*At right, a Snark guided missile sits on launcher at Patrick AFB, Fla.*

*Between 1950 and 1959, Ground Observer Corps volunteers (below) maintained "Operation Skywatch" as part of the nationwide air defense effort.*

*At left, ground crew at Bergstrom AFB, Tex., pull chocks from the SAC B-52 City of Austin*

*At bottom left, forward air controller Capt. Ronald Miller flies in his O-1E Bird Dog over Vietnam.*

*Below, a SAC missileer opens the blast door to the alert facility.*

*Left, at the sound of a klaxon, a B-52 crew runs toward their airplane, which is ready to go. SAC's alert posture hit a new high during the Cuban Missile Crisis, when up to a third of the B-52s were on airborne alert and the others were prepared to take off in 15 minutes.*

*Below, SAGE centers formed the central nervous system of air defense. The "Semi-Automatic Ground Environment" used cutting edge electronics to control the air defense battle. Aircraft movements were tracked on radar scopes, like those seen here.*

*A four-ship of F-105 Thunderchiefs (center photo) bombs targets in North Vietnam.*

*Above, at the Air Force Association's national convention in San Francisco in 1960, USAF Chief of Staff Gen. Thomas D. White unveiled the Minuteman ICBM. It was the first public showing for the new missile.*

*At left, an AC-130 gunship.*

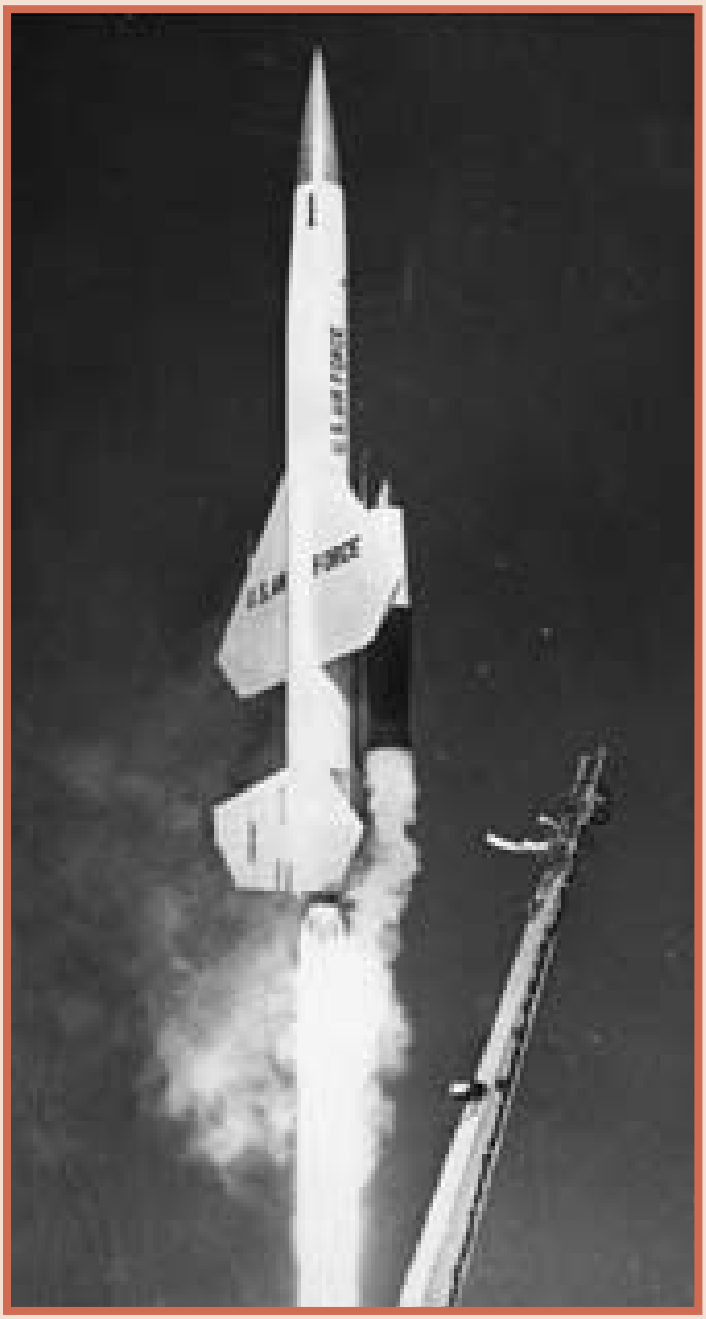
*At right, an early SAC airborne command post aboard a specially equipped KC-135. Inset: An EC-135 refuels another command post-equipped EC-135.*

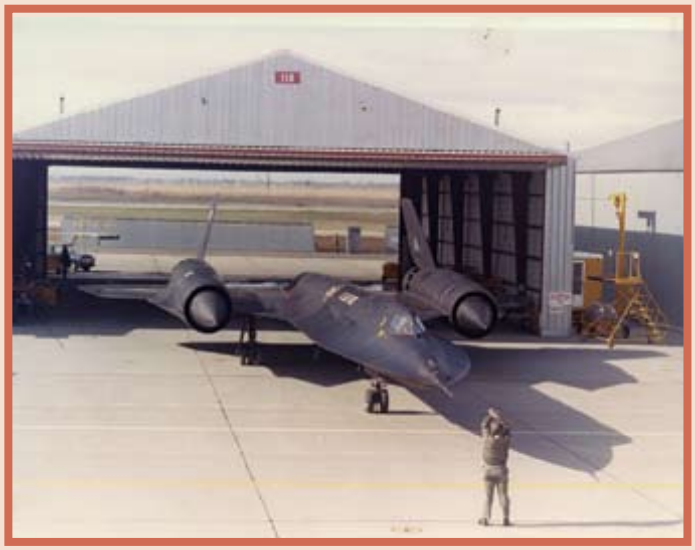
*Clockwise, an F-4 Phantom carries Genie air-to-air rockets on test over Edwards AFB, Calif.*

*TAC F-100 Super Sabres.*

*Strategic Air Command SR-71.*

*Air Force Bomarc missile.*





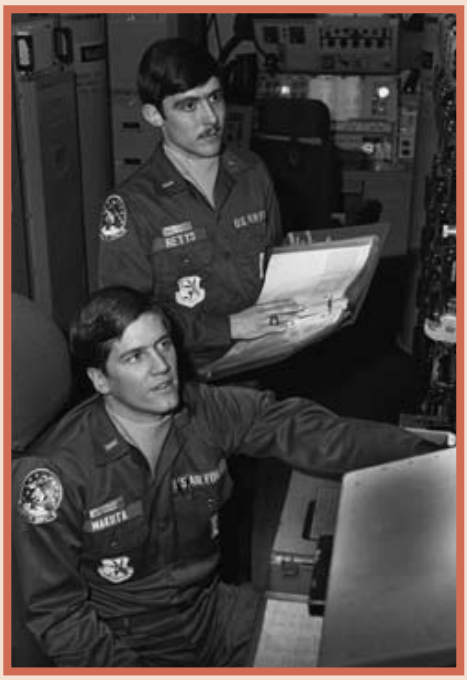
*At left, PACAF C-130 pilot Capt. Charles Mays, 815th Troop Carrier Squadron, prepares for an airlift mission flying out of Japan.*

*Above, Vandenberg AFB, Calif., launches a "dual salvo" of Minuteman II ICBMs to evaluate the multiple firing techniques that could be used under combat conditions.*

*At bottom left, TRW engineers inspect a Defense Support Program ballistic missile warning satellite.*

*Below, US Army soldiers board a USAFE C-130 for a training exercise in Europe.*

*At bottom, Military Airlift Command heavy lifters: A C-5 dwarfs several C-141s at Rhein-Main AB, Germany.*



*Above, technicians at the Air Force Cryptologic Depot, Kelly AFB, Tex., assemble components for crypto equipment that will help USAF units ensure communications privacy.*

*Above right, first "brown bar" missile crew: 2nd Lt. John Betts (standing) and 2nd Lt. John Makuta work in a missile procedures trainer at F.E. Warren AFB, Wyo.*

*At right, an Illinois ANG KC-135 refuels Illinois ANG F-4s.*

*Below, a C-5 airlifter stands ready to take onboard 22 Army OH-6A helicopters.*

*Above, a USAFE F-111 from RAF Upper Heyford, UK.*

*At far left, combat controller SSgt. William Roberts forwards an airstrike report to other controllers of Det. 1, 5th Aerial Port Squadron, Wiesbaden AB, Germany.*

*At left, an F-84F Thunderstreak pours five-inch rockets into a target, practicing for the USAF world-wide weapons meet.*

*Above, a SAC B-58 Hustler.*

*At right, an 8th Tactical Fighter Wing A-37 Dragonfly, following a bombing mission over North Vietnam.*

*At right, B-1B bombers on the production line at Rockwell plant at Palmdale, Calif.*

*Below, a SAC U-2 reconnaissance aircraft.*

*At left, a Peacekeeper ICBM.*

*Above, an F-4G Wild Weasel of the 37th Tactical Fighter Wing, George AFB, Calif.*

# COLD WAR VOICES

## Iron Curtain

"From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the Continent."***—Winston Churchill, Fulton, Mo., March 5, 1946.***

## The East European Buffer

"What can be surprising in the fact that the Soviet Union, in a desire to ensure its security for the future, tries to achieve that these countries should have governments whose relations to the Soviet Union are loyal?"***—Stalin on eastern Europe, Pravda, March 1946.***

## Introducing Containment

"It is clear that the main element of any United States policy toward the Soviet Union must be that of long-term, patient but firm and vigilant containment of Russian expansive tendencies."***—George Kennan, "The Sources of Soviet Conduct," Foreign Affairs, July 1947.***

## Force With a Mission

"The fundamental goal of the Air Force should be the creation of a strategic atomic striking force capable of attacking any target in Eurasia from bases in the United States and returning to the points of takeoff."***—Gen. Curtis E. LeMay, commander of Strategic Air Command, 1948.***

## NATO Charter

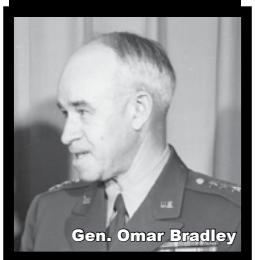
"The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all." ***—Article 5, NATO Treaty, April 4, 1949.***

## Focus on the Global Challenge

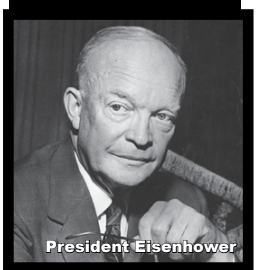
"We will refuse absolutely to allow local wars to divert us from our central task."***—Gen. Omar Bradley, chairman of the Joint Chiefs of Staff, Oct. 1950.***

Stalin

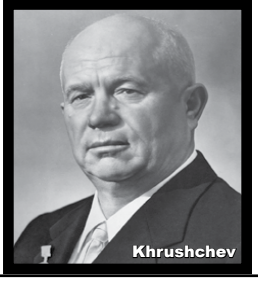
Gen. Curtis E. LeMay



Gen. Omar Bradley



President Eisenhower



Khrushchev

## US Blueprint for Cold War

"It is clear that a substantial and rapid building up of strength in the free world is necessary to support a firm policy intended to check and roll back the Kremlin's drive for domination."***—NSC 68, "United States Objectives and Programs for National Security," April 14, 1950.***

## Using Nuclear Weapons

"We've got to consider the atomic bomb as simply another weapon in the arsenal."***— President Eisenhower, May 6, 1953.***

## Domino Theory

"You have broader considerations that might follow what you would call the 'falling domino' principle. You have a row of dominoes set up, you knock over the first one, and what will happen to the last one is the certainty that it will go over very quickly."***— President Eisenhower on nations in Indochina and their strategic importance, news conference, April 7, 1954.*** \

## Hungarian Appeal for Help

"Since the early morning hours Russian troops are attacking Budapest and our population. . . We have almost no weapons. . . What is the United Nations doing? . . . They just brought us a rumor that the American troops will be here within one or two hours. . .We are well and fighting at 9:20 a.m." ***— Teletype message from Budapest newspaper during the Hungarian rebellion, Nov. 4, 1956.***

## We Will Bury You

"Whether you like it or not, history is on our side. We will bury you."***—Soviet leader Nikita Khrushchev, message to the West, Nov. 18, 1956.***

## And the Real Answer Was What?

"The Air Force sees our principal danger in the growing strategic air and missile forces of the Soviet Union." ***—Army Gen. Maxwell Taylor (a***

***future chairman of the Joint Chiefs of Staff), advocating "flexible response" and more emphasis and funding for the ground forces, 1959.***

## The Surprise That Failed

"I had the idea of installing missiles with nuclear warheads in Cuba without letting the United States find out they were there until it was too late to do anything about them."***—Khrushchev, in his memoirs, recalling the Cuban Missile Crisis of 1962.***

## High Noon

"It shall be the policy of this nation to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States, requiring a full retaliatory response upon the Soviet Union."***—President Kennedy in Cuban Missile Crisis, Oct. 22, 1962.***

## All Options Open

"Even in limited war situations, we should not preclude the use of tactical nuclear weapons, for no one can foresee how such situations might develop."***—Secretary of Defense Robert S. McNamara, 1962.***

## Wars in the Nuclear Shadow

"I point out to you that you cannot fight a limited war except under the umbrella of strategic superiority."***—Gen. Curtis E. LeMay, Air Force chief of staff, 1964.***

## End of the Bomber

"A deterrent force, consisting only of hardened and dispersed land-based and sea-based missiles, with all of the vulnerable, earlier-generation missiles deactivated and all manned bombers retired from active deployment."***—Prediction of the strategic force of 1970 by Roswell Gilpatric, immediate past deputy secretary of defense, April 1964.***

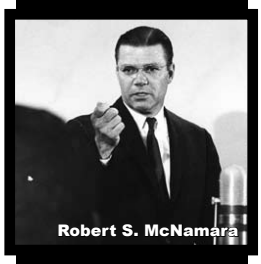
## Great Expectations

"There is no indication that the Soviets are seeking to develop a nuclear force as large as ours."***—Secretary of Defense Robert S. McNamara, April 12, 1965.***

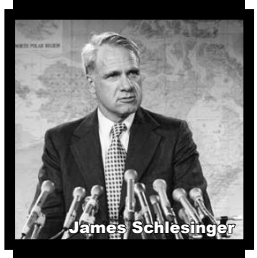
## (Mutual) Assured Destruction

"It is important to understand that assured destruction is the very essence of the whole deterrence concept."***—Secretary of Defense Robert S. McNamara, Sept. 18, 1967.***

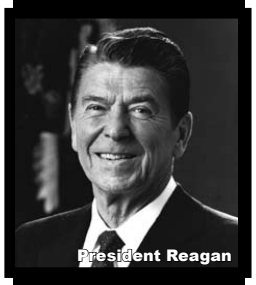
President Kennedy


Robert S. McNamara

Roswell Gilpatric


James Schlesinger

T. K. Jones


President Reagan

Mikhail Gorbachev

## Detente

"After a period of confrontation, we are entering an era of negotiation."***—President Nixon, inaugural address, Jan. 20, 1969.***

## MAD Not Credible

"To threaten to blow up all of an opponent's cities, short of an attack on our cities, is hardly an acceptable strategy, and in most circumstances the credibility of the threat would be close to zero."***—Secretary of Defense James Schlesinger, 1976.***

## The Problem With Detente

"Well, so far detente's been a one-way street that the Soviet Union has used to pursue its own aims."***—President Reagan, news conference, Jan. 29, 1981.***

## With Enough Shovels

"Everybody's going to make it if there are enough shovels to go around. . . Dig a hole, cover it with a couple of doors and then throw feet of dirt on top. It's the dirt that does it."***—T. K. Jones, deputy under secretary of defense, Jan. 16, 1982.***

## Ash Heap of History

"What I am describing now is a plan and a hope for the long term — the march of freedom and democracy which will leave Marxism-Leninism on the ash heap of history."***—President Reagan, "Westminister speech" to British Parliament, June 8, 1982.***

## Berlin Wall

"Mr. Gorbachev, tear down this wall."***—Reagan in Berlin, June 12, 1987.***

## Signs of Trouble

"When I found myself at the helm of this state it was already clear that something was wrong with this country."***—Mikhail Gorbachev, last leader of the Soviet Union, resignation speech, Dec. 25, 1991.***

## The Empire Was Evil

"The world can sigh in relief. The idol of communism, which spread everywhere social strife, animosity, and unparalleled brutality, which instilled fear in humanity, has collapsed."***—Russian Pres. Boris Yeltsin, joint session of Congress, June 17, 1992.***

***(Quoted by Richard Pipes, "Misinterpreting the Cold War," Foreign Affairs, Jan-Feb 1995)***

# COLD WAR

## CLOSE-UPS

# Bombers

In the early years of the Cold War, the pre-eminent weapon was the heavy bomber. It was the only means of delivering nuclear weapons, which were central to USIII defense strategy. The bomber—and the US Air Force—had become the nation's first line of defense.

US bombers left over from World War II had limited range. The first bomber able to fly for intercontinental distances was the huge B-36, powered by six piston engines and four turbojets ("six turning and four burning"). It was an awesome airplane, but it soon gave way to the all-jet B-47s and B-52s.

ICBMs, developed in the 1950s, challenged the primacy of the bomber. In 1964, a high DOD official predicted that the bomber would be obsolete in 10 years and displaced by the ICBM, but it didn't work out that way.

The B-52 (below) was used to good effect dropping conventional bombs in Vietnam, and the flexibility of the bomber was enhanced by stand-off weapons that could be used to attack targets from a distance away.

In the 1960s, two medium-range supersonic bombers came into service, the B-58 and the FB-111, which was a stretched variant of a fighter-bomber. The best looking bomber that never entered service was the high flying B-70 (below), which was canceled because of its vulnerability to surface-to-air missiles.

The B-1, introduced in the 1980s (after having been canceled in the 1970s), was the first new heavy bomber in a long time. Just as the Cold War was ending, the stealthy B-2 Spirit made its first flight. It would add a whole new dimension to the story of the strategic bomber.

At the turn of the century, the Air Force was still flying the B-52, which was still highly regarded—the ultimate response to the predictions, four decades earlier, that the manned bomber had reached the end of its value.

# Air Defense

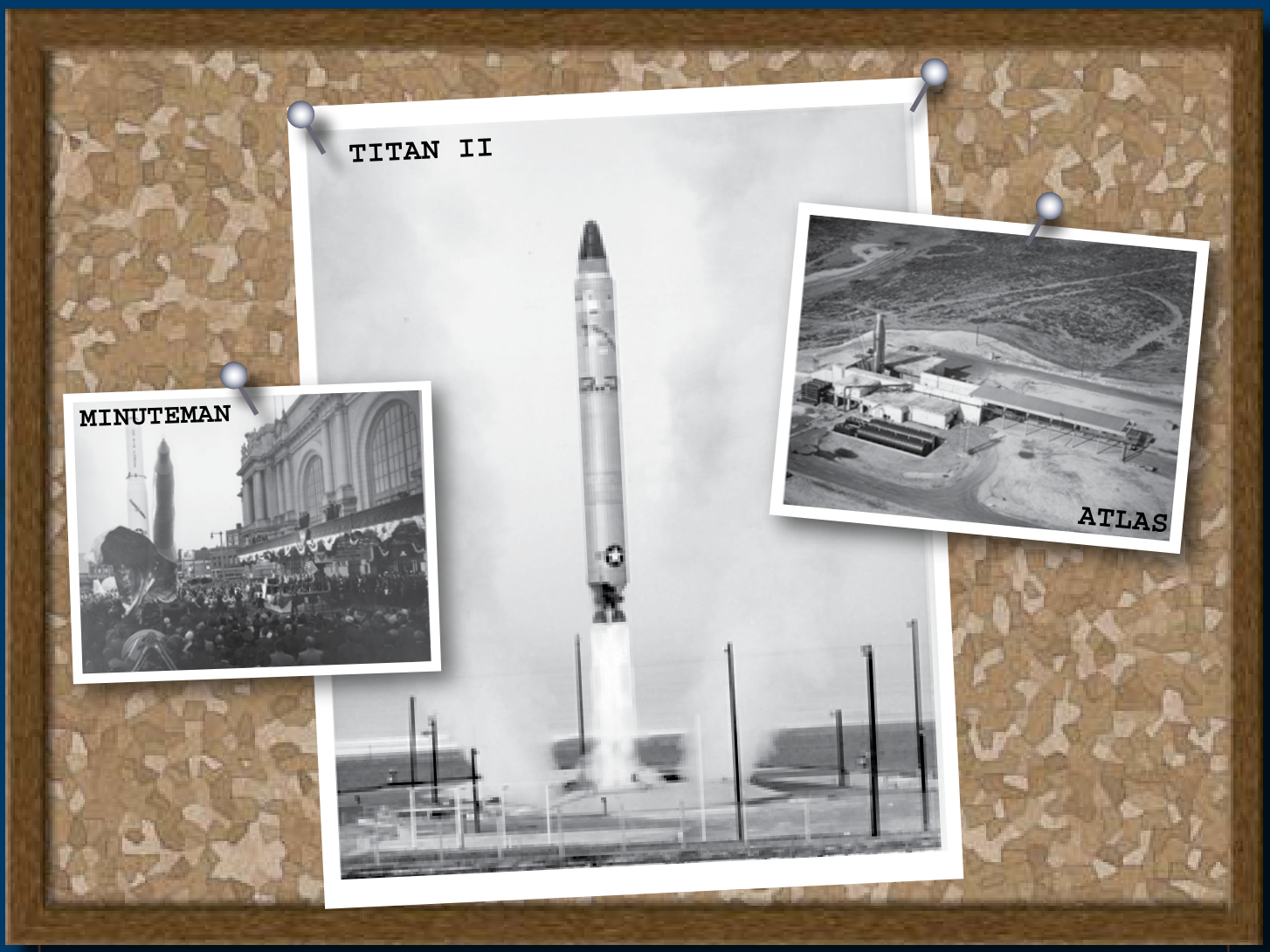
To Americans in the 1950s, the danger of a nuclear attack on the United States seemed very real and very immediate. Citizens built fallout shelters in their back yards and Ground Observer Corps volunteers watched the sky with binoculars.

The Russians had exploded an atomic bomb in 1949. The Soviet Tu-4 Bull—reverse-engineered from B-29s interned in the Soviet Union in World War II—could reach the United States on one-way missions. The threat deepened as the Soviets fielded long-range jet and turboprop bombers and thermonuclear weapons.

Air Defense Command, shorted on funding in the immediate postwar years, underwent a rapid buildup. In 1957, Canada joined the United States in forming the North American Air Defense Command. The DEW Line, a string of radars across the arctic from Alaska to Greenland, went operational in 1958. EC-121 radar aircraft (below) also kept watch. Early interceptors like the F-86D were succeeded by supersonic F-102s (below). The classic interceptor of the 1960s was the F-106, an improved version of the F-102. During the Cold War, such aircraft routinely intercepted Soviet bombers flying near the air defense perimeter. The interceptors were augmented by the Bomarc air defense missile.

In the 1950s and 1960s, the Soviet Union fielded ICBMs, which could strike the United States within 30 minutes and against which there was no defense. Given that, there seemed less reason to maintain a costly defense against air attack. In 1980, Air Defense Command was inactivated and its assets and missions were redistributed to other commands.

Air defense of North America would not see a resurgence until the terrorist attacks on New York and Washington Sept. 11, 2001.




# ICBMs

No weapon was more symbolic of the Cold War than the Intercontinental Ballistic Missile. It could travel thousands of miles and deliver a warhead on target within minutes. There was no defense against it. From the early 1960s on, the ICBM was the main threat in the nuclear arsenal of the Soviet Union. It was also a leading element in the US Strategic Triad.

The potential of guided missiles had been demonstrated by German V-2 rockets in World War II. The Air Force took interest, as did the Army (which regarded missiles as a form of artillery). An early Air Force missile program was canceled in postwar budget cuts in 1947. In the 1950s, the Air Force developed both ballistic missiles and aerodynamic missiles with jet engines and wings like the Snark (below).

The Department of Defense settled the roles and missions issue in 1956, assigning the Air Force responsibility for developing and operating land-based ICBMs. However, in August 1957, the Soviet Union launched the world's first ICBM, and two months later, used the same rocket to put the Sputnik satellite into orbit. Atlas, the first US ICBM, was launched in December.

The United States soon caught up. The perception of a "missile gap" in the Soviet favor was baseless. The Atlas ICBM reached initial operational capability in 1959. By the end of the 1960s, the US had fielded a formidable array of second generation ICBMs, with 54 Titan II and 1,000 Minuteman missiles.

Eventually, these missiles became vulnerable to improved Soviet ICBMs. In 1985, the Air Force fielded its best missile of the Cold War, Peacekeeper, which was better able to withstand attack and which was also more effective against superhardened targets, which had begun to proliferate in the Soviet Union.

INSIDE THE LOOKING GLASS

GEN. CURTIS E. LEMAY

LOOKING GLASS
*Photo via Robert F. Dorr*

# Strategic Air Command

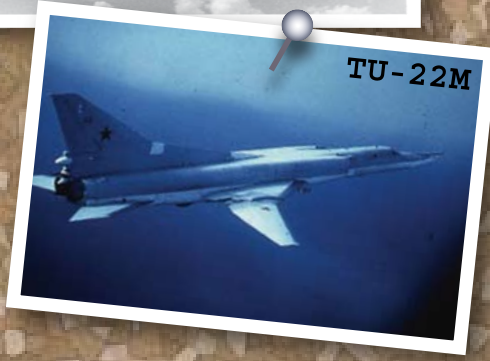
In the early part of the Cold War, the centerpiece of US defense strategy was the Strategic Air Command. SAC had been formed in 1946, but it was under the legendary Gen. Curtis E. LeMay, who took command in 1948, that it became the most famous combat force in the world.

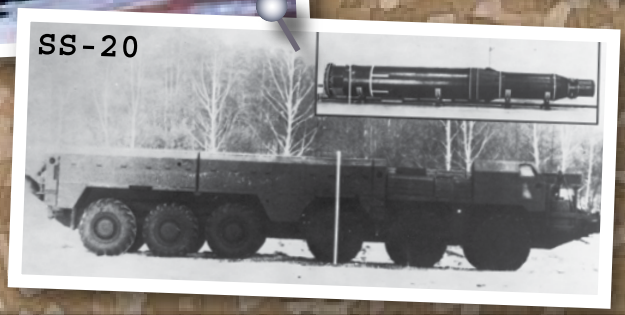
In its confrontation with the Soviet Union, the United States relied primarily on nuclear weapons and airpower. The red telephone (below) was symbolic of SAC on alert. By 1961, more than 30 percent of the people in the Air Force were in SAC, which by then had almost 1,500 bombers. At any given time, as many as half of the bombers were on alert for fast takeoff in the event of attack.

SAC also added ICBMs to its operational force. By 1964, there were equal numbers of bombers and ICBMs on alert. After that, the number of ICBMs was always higher.

However, the manned bomber remained close to SAC's heart. Its effectiveness was aided by the development of standoff weapons. Among the first of these was the Hound Dog missile, designed to attack air defenses en route to the target. Better capability came with the Short Range Attack Missile in 1972 and the Air Launched Cruise Missile (below) in 1982.

In the 1980s, SAC got its first new bomber in a long time, the B-1 (below) and as the Cold War was ending, the stealthy B-2 made its first flight. From 1961 through the end of the Cold War, SAC kept an airborne command post in the air continuously to take over should the big command post on the ground be attacked and destroyed. The aircraft, an EC-135, was called "Looking Glass because it reflected the capability of the ground command post. There was always a general officer aboard looking glass. The SAC commander in chief took his turn along with other generals in the command.




# Soviet Aerospace Power

In the postwar era, the Soviets recognized that huge tactical ground and air forces—their main strength in World War II—were no longer sufficient. To contend with the United States, they would need strategic airpower.

Their initial capabilities were second hand. The Soviet atomic bomb, tested in 1949, was an exact copy of the US "Fat Man" weapon dropped on Nagasaki. The plans were stolen by spies working for the Russians. The Tu-4 Bull bomber was reverse engineered from US B-29s interned in the Soviet Union during the war.

In the 1950s, the Soviets developed their own weapons, among them the Tu-95 Bear, a turboprop bomber with very long range and endurance and with speed almost as fast as that of turbojets.

The Soviet Union's prestige rose in 1957 when it launched the world's first ICBM. Soviet leader Nikita Khrushchev, exaggerating wildly, claimed to be mass producing missiles "like sausages." That was untrue, but in 1961, he further announced that the USSR would stop developing bombers and rely on ICBMs.

Later, after Khruschev's downfall, the Soviets produced several excellent bombers, notably the Tu-22M Backfire and the Tu-160 Blackjack, which flew at March 2.0. They also fielded highly capable fighters like the sleek MiG-25 Foxbat (below).

In 1985, Soviet strategic forces had 846 bombers, 982 sea-launched ballistic missiles, and 1,398 ICBMs. The most awesome of these weapons was the SS-18, a highly accurate ICBM that carried 10 warheads and was expressly designed to attack hardened US missile sites.

In the 1980s, the Soviets threatened Western Europe with mobile SS-20 missiles but withdrew them after NATO countered with US Air Force Ground-Launched Cruise Missiles and short-range US Army Pershing IIs.

Soviet military power was formidable, but in the long run, the economy was too weak to support it, and this was a major reason for the eventual collapse of the Soviet Union.

# Conflicts in the Cold War Shadow

There was no single "front line" in the Cold War. The real confrontation was between US and Soviet strategic nuclear forces. Both sides worked to keep that under control. An uneasy peace also prevailed in central Europe, where NATO and Warsaw Pact forces were lined up against each other. Armed conflicts happened elsewhere—always in the shadow of the larger Cold War—and when the superpowers clashed, it was seldom direct or open.

When the Korean War started in June 1950, the United States believed it was the beginning of a worldwide Communist offensive and thus made a stand. Red Chinese forces entered the war, but US and UN forces foiled the invasion. Air Force F-86s prevailed over North Korean airpower. Much later, it was learned that some of the North Korean MiG-15s were flown by Russian pilots. After three years, the Korean War ended in a truce.

In 1956, Soviet leader Nikita Khrushchev warned the West, "We will bury you." In 1961, he pledged Soviet support for "wars of national liberation." In one such, North Vietnam had thrown out the French and, equipped and supplied by the Russians and the Chinese, was seeking to conquer South Vietnam. The United States went to the aid of South Vietnam. Airpower was our best shot at success, but the effectiveness of strikes against the North by F-105s (below) and F-4s was diminished by hesitation and gradualism. US political leaders feared that stronger action might pull the Soviets into the war. The battery of the first SA-2 surface-to-air-missile to shoot down a US aircraft was manned by a Soviet SAM crew.

The Soviets experienced their own version of Vietnam in Afghanistan between 1979 and 1989. The Afghan rebels, making good use of US Stinger air defense missiles, prevailed over the Russian regulars. The defeat hastened the collapse of the Soviet empire in 1991.

# Global Reach

In February 1949, an Air Force B-50 bomber took off from its base in Texas, stayed in the air for almost four days, and made the first non-stop flight around the world before landing again in Texas. The airplane was the Lucky Lady II, a standard B-50 flown by a regular Air Force crew. It was refueled over the Azores, Saudi Arabia, the Philippines, and Hawaii.

The Lucky Lady II demonstrated that aircraft, flying from American bases, could project power to the far reaches of the Earth. During the Cold War, airlift and aerial refueling gave the United States unmatched global mobility. With refueling, US bombers could strike anywhere; with strategic airlift, US forces could go anywhere.

The main tanker in the early years was the KC-97 (below), introduced in 1950. It was a variant of the B-29 bomber. However, jet tankers were better able to fly along with jet bombers. The KC-97 remained in service for years, but the Air Force relied primarily on the KC-135, which came along in 1957.

For many years, the Air Force relied on the C-124 as its main strategic airlifter. It was known as "Old Shaky," especially as it aged, but it got the job done. Big clamshell doors opened in the front so vehicles could be driven on and off. It was augmented by the C-133, which carried large loads, including ballistic missiles.

The workhorse strategic airlifter of the Cold War was the C-141, which entered service in 1965. It was twice as fast as the C-124, carried twice the load, and could handle oversize cargo. The C-5, operational in 1970, added the critical capability to haul outsize cargo. After 1981, they were supplemented by the KC-10, a combination airlifter and tanker.

Photo by Pat Halloran via Warren Thompson

# Cuban Missile Crisis

The Cuban Missile Crisis of 1962 is the closest the Cold War ever came to World War III. It began when the Soviet leader, Nikita Khrushchev, decided to put nuclear-tipped ballistic missiles in Cuba. That would have made a dangerous difference in the strategic balance. From Cuban bases, medium range missiles could reach Washington. Intermediate range missiles could target almost any location in the United States. Khrushchev hoped to have them operational before the Americans discovered they were there. However, an overflight by an Air Force U-2 photographed missile sites under construction on Oct. 14. When the film from the U-2 was analyzed, the Russian plan was exposed. President Kennedy was notified on the morning of Nov. 16, and the clock began ticking on the 13-day Cuban Missile Crisis.

President Kennedy demanded that the Russians withdraw the missiles, declaring that any missile attack from Cuba would be regarded as an attack by the Soviet Union on the United States. He ordered a naval blockade of Cuba.

Strategic Air Command went on DEFCON ( Defense Condition) 2, one step short of war. Bombers were kept on constant airborne alert. North American Air Defense Command moved large numbers of fighter-interceptors and air defense batteries to the Southeastern United States.

U-2 overflights continued, and Air Force RF-101s and Navy F-8Us gathered more details from low-level reconnaissance. As Khrushchev was reconsidering his options, Soviet missileers in Cuba exceeded their orders and shot down a U-2, making matters even more tense. The next day, Oct. 28, Khrushchev announced that he would pull his missiles out of Cuba, and the crisis was over.

Afterward, President Kennedy visited the strategic and tactical reconnaissance crews, presented them Presidential Unit Citations, and told them they had "contributed as much to the security of the United States as any unit in our history."

SR-71

RC-135 RIVET JOINT

RB-47

# Strategic Eyes and Ears

By 1950, the Soviets had the atomic bomb and long-range bombers to deliver it. The US desperately needed information about the forces and preparations at bases from which the Soviets could launch an attack.

The early intelligence aircraft were mostly modified bombers like the RB-50. They were soon superseded by jets, notably the RB-47 in collecting photo, electronic, and signal intelligence along—and sometimes just over—the periphery of the Soviet Union. It was dangerous work. More than 250 airmen were shot down on such missions between 1950 and 1970.

Tactical aircraft were used on occasion. The first intelligence photos of the Soviet Far East were taken by an RF-80A, and later on, the RF-4C was employed extensively to gather intelligence on the Warsaw Pact in Europe.

Several splendid aircraft were built expressly for the intelligence-surveillance-reconnaissance mission. The U-2 (below) flew at an altitude of 13 miles. The SR-71 Blackbird flew even higher and reached speeds of Mach 3.5. After a U-2 was shot down over the Soviet Union, the overflights of the USSR were flown by satellites, but the U-2 and the SR-71 served effectively throughout the Cold War.

The key aircraft in electronic intelligence was the RC-135. It had more room for electronic gear and crew members than the RB-47s did, and there were several variants of it. Foremost among them was the RC-135 Rivet Joint, whose elongated "hog nose" contained a powerful radar and whose "hog cheeks" held antennas and receivers. Rivet Joint collected electronic intelligence and intercepted communications and other signals around the Soviet periphery.

Other EC-135s were Cobra Ball, which gathered information about Soviet ICBMs, Combat Sent, whose specialty was "fine grain" intelligence about Soviet SAMS, and Lisa Ann, which monitored missile tests on the Kamchatka peninsula.

SOVIET TU-16
*Swedish Airforce photo*

SOVIET SU-27

NORTH KOREAN MIG-15
*Photo via Robert F. Dorr*

# Soviet Allies and Clients

The Soviet Union was the leader of both the Soviet military empire and the world Communist movement. Its most important alliance was with the east European nations of the Warsaw Pact, who also constituted a deep buffer zone between NATO and the Soviet homeland.

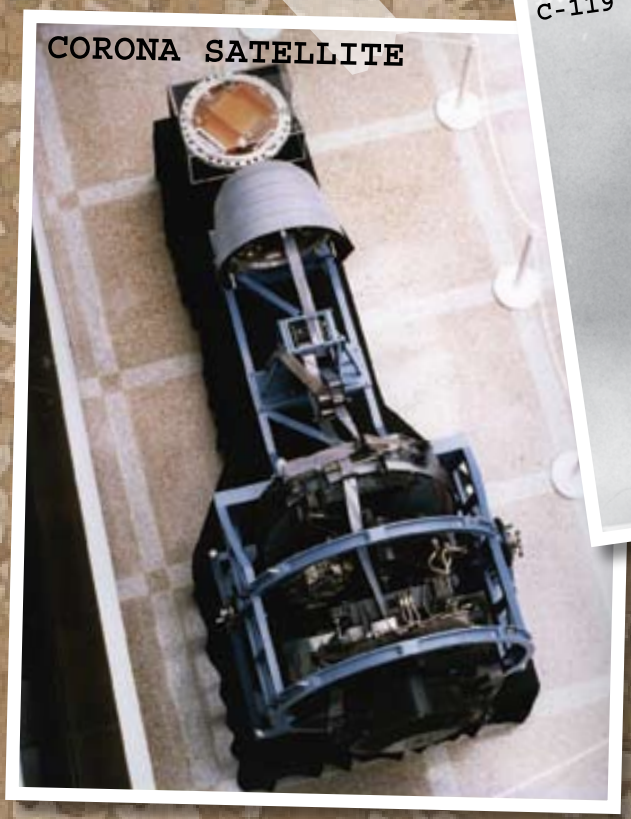
A second huge Communist state was born when the People's Republic of China seized power in 1949. It allied with the Soviet Union in 1950. In less than 10 years, Russia and China parted ways for reasons of ideology and politics, but by then, the Chinese had adopted Soviet military systems like the Tu-16 bomber and were producing aircraft and other weapons for themselves.

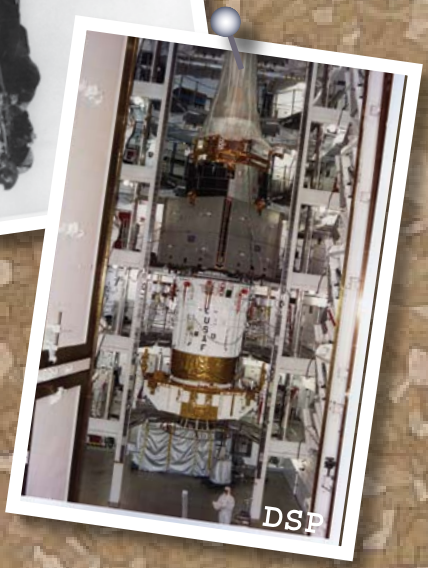
Client states could count on Soviet assistance, training, and military systems such as the North Korean MiG-15 and the North Vietnamese MiG-21 (below). The Soviets used client states for their own purposes, such as in 1962, when they sought to deploy nuclear ballistic missiles in Cuba.

The Soviets fervently courted the Third World, where the Marxist-Leninist line appealed to many emerging nations. Between 1980 and 1988, Soviet military exports to the Third World included 7,925 tanks, 2,620 supersonic aircraft, 1,705 helicopters, and 32,210 surface-to-air missiles.

Warsaw Pact armed forces had modern Soviet military equipment (like the Su-27 fighter), but their alliance was based on compulsion. The Red Army was used to put down rebellions in Hungary (1956) and Czechoslovakia (1968). There was also recurring unrest in Poland.

In December 1988, Soviet leader Mikhail Gorbachev nullified the "Brezhnev Doctrine"—under which client states had been forbidden to deviate from the Soviet norm—and gave Warsaw Pact member nations freedom to choose their own directions. The departures began promptly, and in July 1991, the Warsaw Pact was formally disbanded.






# Space

The first photos of the Soviet Union from space were taken by a Corona satellite (photo cue), a joint venture of the Air Force and the CIA, in April 1960. Secrecy was preserved by a cover story. The satellite was supposedly for scientific, non-military purposes, and its name was supposedly "Discoverer."

The film container was ejected from the Corona satellite and descended through the atmosphere on a parachute. On typical missions, a C-119J would grab the capsule in mid-air although the very first one fell into the ocean and was recovered there.

Before the Corona missions, US intelligence had only a partial picture of Soviet forces and conclusions were uncertain. Corona, which was not retired until 1972, filled in the blanks.

In the late 1950s and early 1960s, the Air Force put strong emphasis on space. The Air Force billed itself as "the primary aerospace arm of the United States." For a while, the journal of the Air Force Association changed its name to Air Force Magazine/Space Digest.

The Air Force pursued the concept of "military man in space," but ultimately, the Cold War missions were performed by unmanned systems. However, Air Force astronauts flew on space missions and on the space shuttle under the auspices of NASA.

Air Force Space Command was formed in 1982. It viewed its top mission as ballistic missile launch warning and performed this task with the Defense Support Program satellite. Other Air Force satellites provided communications links, weather information, and various services and data.

One of the best known Air Force satellites was the Navstar Global Positioning System (below), whose signal gave people on Earth their precise location. Before it became fully operational, civilian models—somewhat less accurate than the military version—had gained popularity with commercial fishermen and others who needed to know exactly where they were.

RAF HARRIER
*RAF photo*

GERMAN F-104s

NATO AWACS

# NATO

As the Soviet threat intensified, the United States and 11 European nations formed the North Atlantic Treaty Organization in 1949. They agreed that an attack upon any one of them would be met as an attack upon all.

At a conference in Lisbon in 1952, NATO determined that a conventional defense of Europe would require 90 ground divisions and 10,000 aircraft. Regarding this goal as unattainable, NATO adopted a strategy that relied ultimately on extended deterrence from the US strategic nuclear "umbrella."

The alliance was successful but was vulnerable to internal quarreling. The worst such crisis came in 1966 when France pulled its armed forces out of NATO and the headquarters had to relocate from Paris to Belgium.

NATO's strong right arm was US Air Forces in Europe. In the 1950s, USAFE flew combat aircraft from more than 20 bases in Europe. Many of its aircraft were capable of delivering nuclear as well as conventional weapons.

Early in the Cold War, flight lines in the NATO countries were home to such aircraft as the US Air Force's F-100 (below) and the F-104, operated by the German Luftwaffe. Later, the NATO order of battle included F-4s, Panavia Tornados, Royal Air Force Harrier jump jets, F-16s, tank-busting A-10s (below), and many others. In 1982, NATO bought a fleet of E-3 Airborne Warning and Control System aircraft and operated them as an alliance-wide asset.

When the Soviet Union introduced a new threat with mobile SS-20 missiles targeted against Western Europe, NATO responded by authorizing the counter-deployment in the 1980s of US Air Force Ground Launched Cruise Missiles and US Army Pershing IIs. The result was removal of missiles by both sides.

Perhaps the greatest tribute to NATO came at the end of the Cold War, when the Soviet Union's client states in eastern Europe deserted the Warsaw Pact and joined NATO.

C-5 NICKEL GRASS
USAF Art Collection

F-111
Photo via Robert F. Dorr

CASF

# Responding to Contingency and Crisis

After World War II, the United States shouldered a greater global responsibility. The main focus was on strategic nuclear deterrence, but the nation also maintained a capability to project power—especially airpower—to contingencies and crises worldwide.

One instrument for doing this was the Composite Air Strike Force, formed by Tactical Air Command in 1955. It could deploy rapidly to places not within easy reach of regular forces stationed abroad. It consisted of fighters, tankers, support aircraft, and a command element.

The first CASF deployment was in July 1958 to prevent the overthrow of the government in Lebanon. Three hours after notice to go, B-57 bombers were on the way, followed in another three hours by F-100 fighters, C-130 airlifters, tankers, and other aircraft. A month later, a second CASF went to the Far East, where Red China was putting pressure on the Nationalist Chinese island of Quemoy. The CASF was part of the US counter-pressure.

In the CASF unit pictured here a KB-50 tanker leads the parade. Refueling are an F-100, a B-66, and an F-101. C-130s, carrying personnel and flyaway kits, come behind.

In the 1973 Yom Kippur War, the Arab States, supplied and equipped by the Soviet Union, attacked Israel, which had lost many of its tanks, consumed much of its ammunition, and was facing defeat. The United States launched Operation Nickel Grass, a massive airlift to resupply Israel. C-5s and other aircraft delivered replacement tanks, tons of howitzer shells, helicopters, spare parts, and more. They flew 567 resupply sorties, enabling Israel to fight off the invasion.

The Air Force demonstrated its long reach with Operation El Dorado Canyon in 1986. F-111s took off from Britain and struck targets in Libya, refueling six times, maintaining radio silence, and returned to bases in Britain.

After the Cold War, these capabilities evolved into Air and Space Expeditionary Forces, responding to contingencies at remote locations and deploying to "bare bases," which had airstrips, water, and not much more.

# The Cold War Force

No sooner had the Cold War ended than the clamor arose to disband the "Cold War Force" that critics said was no longer relevant and should be replaced with something simpler and cheaper.

However, the continuing value of capabilities developed late in the Cold War was soon demonstrated in conflicts of the 1990s in the Persian Gulf, Bosnia, and Serbia. This was especially true of air and space forces.

A technological "Revolution in Military Affairs" had taken place. It revolved around advances in information superiority technology, stealth, and long-range precision strike. In some instances, there was an alternative to the attrition model of warfare and the bloody clash of force on force. Small numbers of air and space forces could achieve amazing things.

In the Gulf War, the stealthy F-117A fighter (photo cue) flew two percent of the combat sorties but accounted for 40 percent of the targets. In the air war over Serbia, stealthy B-2 bombers flew round-trip missions from their base in Missouri and struck as many as 15 different targets on a single sortie.

The use of precision-guided munitions was the norm rather than the exception. In the Gulf War, a fighter rolled in on the Iraqi Defense Ministry in Baghdad and put a bomb neatly down the airshaft. Cold War fighters like the F-15 (below) and F-16, outfitted with improved weapons and avionics, delivered one success after another.

The E-3 AWACS—once denounced as an airplane in search of a mission—was in enormous demand, spotting anything that moved in the air. The E-8 Joint STARS, still in development and operating with a mixed military-contractor crew, was rushed into service in the 1991 Gulf War to track traffic moving on the ground.

All in all, the Cold War Force proved to be a great asset for the nation in post-Cold War conflicts.

# Berlin Airlift

The Berlin Airlift was the first big event of the Cold War. After World War II ended, a large part of Germany was occupied by the Soviet Union. Berlin lay 110 miles inside the Russian zone. It was a divided city, with American, British, French, and Soviet sectors.

By 1948, the Russians were ready to try a power play to consolidate their control. The crisis began when they closed all road, rail, and river routes into Berlin. However, three air corridors into Berlin, each 20 miles wide, remained open. The Allies decided to sustain West Berlin by air.

On June 26, 1948, the US Air Force—which had been in existence for less than a year—opened the Berlin Airlift by delivering 80 tons of food, fuel, and supplies. British and US Navy aircraft soon joined the effort. At the peak of the airlift in 1949, one airplane was landing in Berlin every four minutes.

The aircraft that flew the first missions was the C-47, but it was soon replaced by the workhorse of the airlift, the four-engine C-54. The Russians harassed the air corridors but did not risk open war by attacking the airlifters.

To underscore its commitment, the United States deployed B-29 bombers to the United Kingdom, within striking range of the Soviet Union.

The airlift, dubbed "Operation Vittles," brought the citizens of West Berlin what they needed to make it through the crisis. Their plans foiled, the Russians lifted the blockade and the Berlin Airlift ended Sept, 30, 1949. There had been a total of 277,264 flights into the city, three-fourths of them flown by American pilots. The airlift had delivered nearly 2.3 million tons of supplies.

The Cold War and the US Air Force began about the same time, and over the next 40 years, they would have great effect on each other.

# COLD WAR

# CURIOSITIES

## Accidental Slogan

SAC's slogan, "Peace is Our Profession," is one of the most famous in military history. However, it didn't start out exactly that way. During a reenlistment drive in 1957, a large display was set up in front of SAC headquarters. A painter was called in to do a sign reflecting the theme of the drive" "Maintaining Peace is our Profession." There was not enough room for all the words, so the project officers—a lieutenant colonel and a warrant officer—approved shortening the slogan to omit "Maintaining." The bob-tailed version, "Peace is Our Profession," caught on and spread quickly. SAC decided not to argue with success and adopted it as the official slogan for the command.

## The Washington-Moscow Hotline

During the Cuban Missile Crisis of 1962, the United States and the Soviet Union had no way to communicate rapidly with each other. Messages had to be transmitted, translated, and delivered, and an exchange took about five hours each way.

On Aug. 30, 1963, a secure teletype hotline went into service between Washington and Moscow. Four American-made machines were installed in the Kremlin. Four East German-made machines were placed in the Pentagon.

The primary circuit was a 10,000 mile combination of land lines and ocean cable, stretching from Washington to London, Copenhagen, Stockholm, Helsinki, and finally Moscow. The US transmitted in English; the Russians transmitted in Russian.

The first test message read: "The quick brown box jumped over the lazy dog's back 1234567890."

*These were in vogue during the Reagan years.*

## Who Are Those Guys?

In the Soviet scheme of things, the real boss was the head of the Communist Party, not the premier of the Soviet Union. Stalin's title was general secretary, and in that capacity, he presided over the Politburo, the policy arm of the Party. Khrushchev changed both titles. He became "first secretary," and the Politburo became "the Presidium." When Khrushchev was chucked out of office, Lenoid Brezhnev reverted to the older title, general secretary, and the policymaking body was once again the Politburo.

## The Borrowers

The US monopoly on nuclear weapons ended Aug. 29, 1949, when the Soviet Union exploded an atomic bomb. The first Soviet bomb was an exact copy of the "Fat Man" device dropped on Nagasaki. This was not surprising, since the plans had been obtained years earlier by espionage at Los Alamos.

The means for delivering the Soviet atomic bomb was the TU-4 Bull bomber (above), reverse engineered from American B-29s interned in the Soviet Union during World War II. The Tu-4 could reach targets in the United States on one-way missions.

## The Air Force in Cold War Movies

- *Strategic Air Command* (1955). Jimmy Stewart as a baseball player recalled to active duty. Lots of color footage of the B-36, and introduction of the then-new B-47.
- *Bombers B-52* (1957). SAC wing commander Efrem Zimbalast Jr., flies Cold War missions and woos the daughter (Natalie Wood) of crew chief Karl Malden.
- *Gathering of Eagles* (1963). The basic plot from *Twelve O'Clock High* is transplanted to a B-52 wing struggling to meet an Operational Readiness Inspection, with Rock Hudson in the Gregory Peck role.
- *Dr. Strangelove, or, How I Learned to Stop Worrying and Love the Bomb* (1964). Cynical anti-war comedy, with Peter Sellers in the title role (based on Herman Kahn). Cold War gets out of hand and Doomsday scenario unfolds. B-52 commander Slim Pickens rides an H-bomb down as it falls on Russia.
- *Fail Safe* (1964). Virtually the same story as Dr. Strangelove, but limp by comparison. SAC starts nuclear war by accident. Henry Fonda plays the anguished president of the United States.

***"Strategic Air Command" starred Jimmy Stewart and June Alyson. Stewart brought authenticity to the role. He had been a B-24 bomber pilot in World War II.***

## The Hierarchy of Ballistic Missiles

**SRBM**: short-range ballistic missile. (Less than 1,000 km)

**MRBM:** Medium range ballistic missile (1,000-3,000 km)

**IRBM:** Intermediate range ballistic missile (3,000-5,500 km)

**ICBM:** Intercontinental ballistic missile (5,500+ km) (6,325 US miles)

*Source: Arms Control Association*

CERTIFICATE OF RECOGNITION

JOHN DOE

*In recognition of your service during the period of the Cold War (2 September 1945 - 26 December 1991) in promoting peace and stability for this Nation, the people of this Nation are forever grateful.*

SECRETARY OF DEFENSE

## The Cold War recognition certificate

Those who served in the armed forces between Sept. 2, 1945, and Dec. 26, 1991, are eligible to receive the Cold War Recognition Certificate from the Department of Defense. Civilians who served in the Department of Defense, the intelligence community, and the foreign service are eligible, too. As of June 2005, a total of 1,068,520 of these certificates had been issues.

Applications for a certificate must include proof of service, which can be any government form showing the applicant's name, Social Security or service number, and date of service. (Original copies of documents should not be sent, since they cannot be returned.) Apply to:

CDR, AHRC
Cold War Recognition, Hoffman II
Attn: AHRC-CWRS, 3N45
200 Stovall Street
Alexandria VA 22332
e-mail: cwrs1@hoffman.army.mil
Web site: www.hrc.army.mil

## CONELRAD

If you look at a standard AM radio from the 1950s, you will see small triangles at 640 and 1240 on the dial. The triangles were actually civil defense symbols, and they marked the CONRELAD [CONtrol of Electronic RADiation] frequencies.

In the event of an air attack on the United States, commercial radio stations would have gone off the air to keep the bombers from homing in on their targets by using the radio signals as navigation aids. Radio listeners would have been told—as was explained to them in regular tests of the system—to turn their dials to one of the frequencies marked by a CONELRAD symbol for emergency information. With the advent of ICBMs, the system became less relevant and it went out of existence in the 1969s.

## Cold War in the Comics

"Steve Canyon's Air Power," a comic book published in 1951, was a joint product of the Air Force Association and Harvey Comics. AFA's name and "wee wings" logo appeared on the cover, along with an illustration of a MiG fighter going down in flames under the guns of an F-86 Sabre. (The artist took some liberties with paint and markings.)

The official designation for the comic book was "Harvey Hits No. 52," and today, a copy of it in prime condition is worth $140 on the collectors' market.

## Why It's Not the Pinkbird

SR-71 pilots called their aircraft "Habu," after the Okinawan hooded viper. To the rest of the world, the SR-71 is the "Blackbird."

The flat black paint job supposedly makes it hard to see at high altitude. Ben Rich of the Lockheed Skunk Works —as quoted by William E. Burrows, author of *By Any Means Necessary: America's Secret Air War in the Cold War*—said that a pastel color would have worked better since the sky is pastel.

Black was picked, Rich said, "because real men don't fly pink jets."

## A Heart of Gold

The famous scowl on the face of Gen. Curtis E. LeMay was caused—in part, anyway—by Bell's Palsy, a deadening of facial nerves, the result of flying long hours at high altitudes in the cold cockpits of B-17 bombers in World War II.

## Sausage Story

Soviet leader Nikita Khrushchev had a propensity for making excessive (and sometimes fraudulent) claims. One such was that the Soviet Union ion 1959 and 1960 was turning out ICBMs "like sausages." In At the Abyss: An Insider's History of the Cold War, former Secretary of the Air Force Thomas Reed recounts a story supposedly told by Khrushchev's son, Dr. Sergei Khrushchev (now a US citizen and a member of the faculty at Brown University).

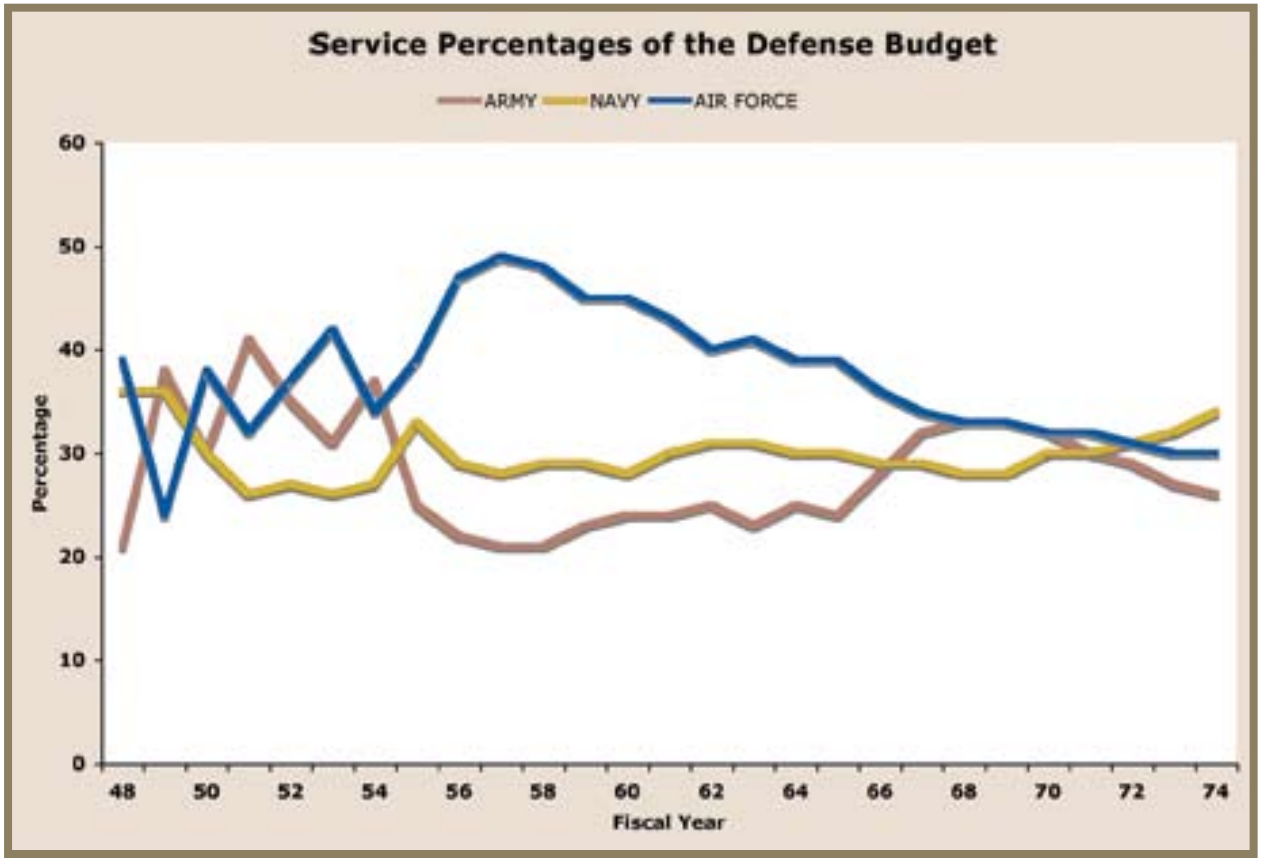
"How can you say we are producing rockets like sausages?" the younger Khrushchev asked. "We don't have any rockets."

"That's all right," his father replied. "We don't have any sausages either."

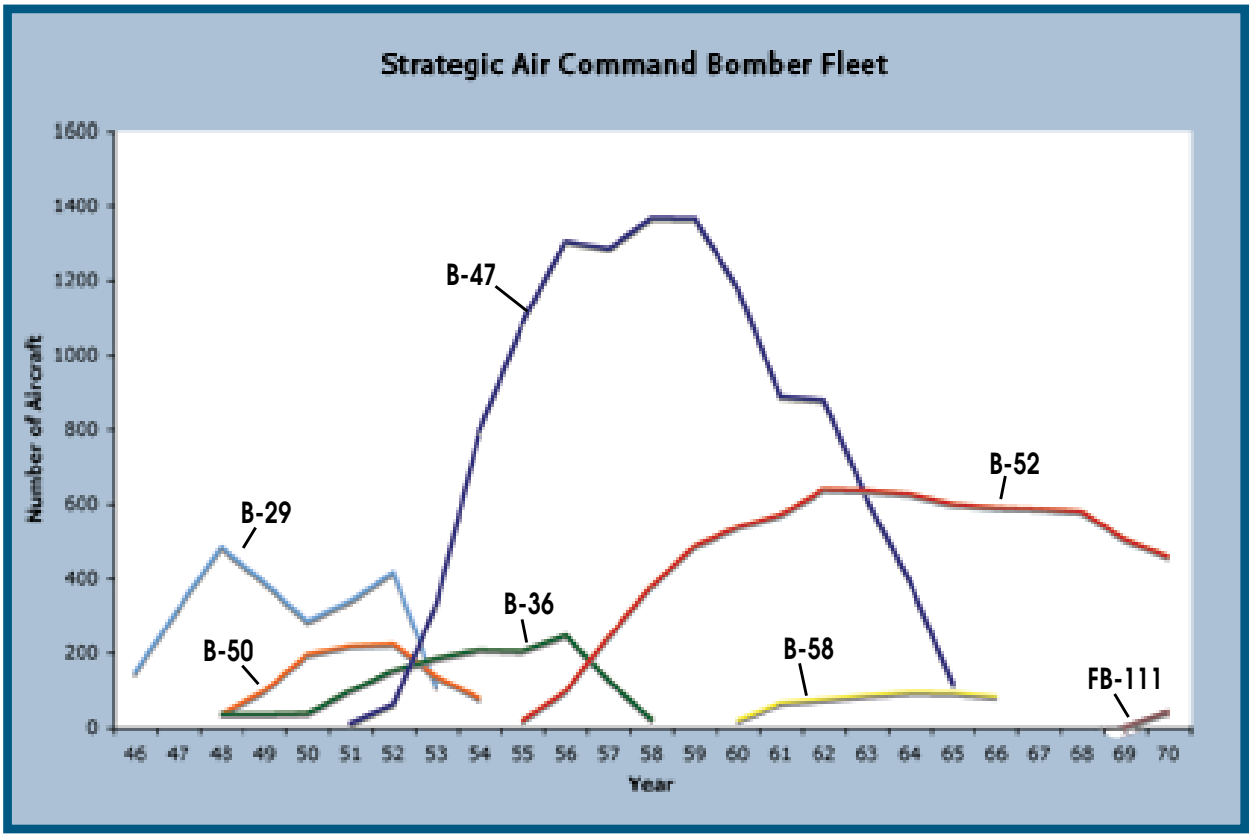
## Red Telephone

The red telephone was the most famous part of SAC command control and communications. When a controller in the command post picked up the red telephone, every missile launch control center, every bomb wing, and every tanker wing was on the line instantly.

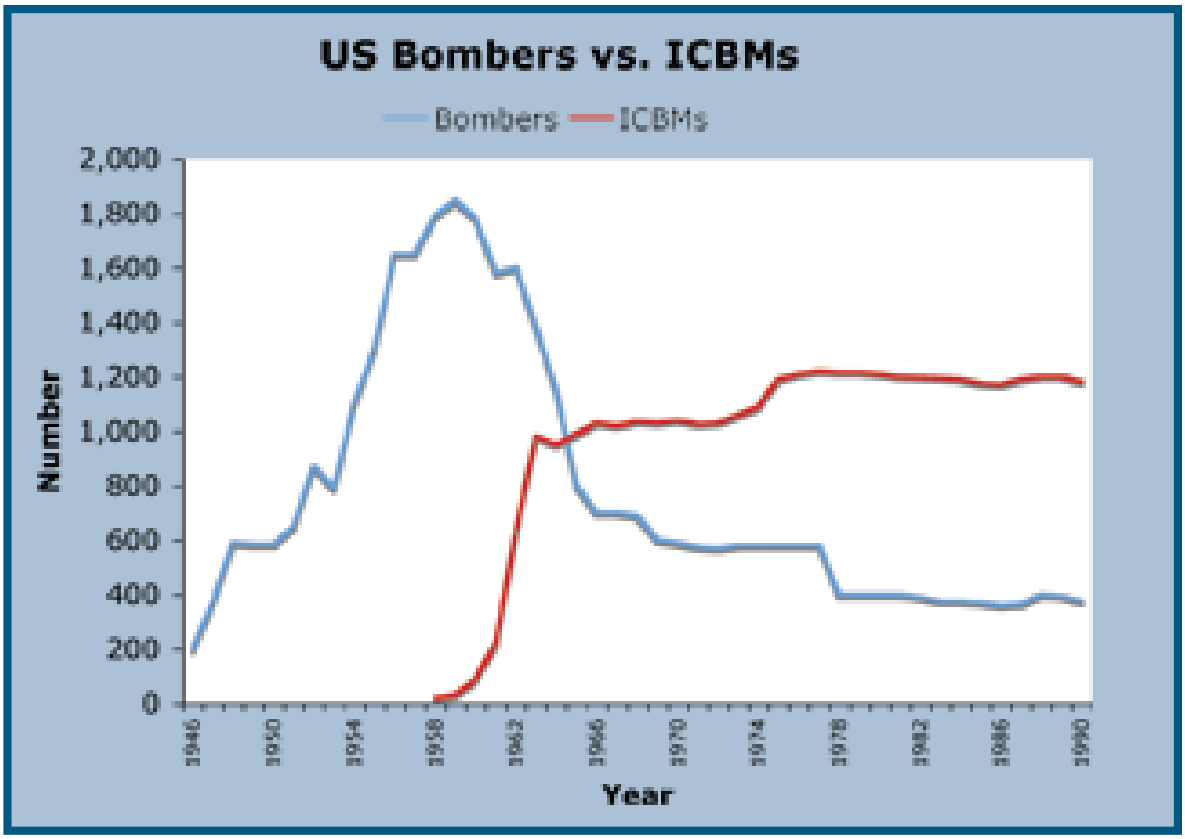
# COLD WAR DATA




*In the era of Massive Retaliation, the Air Force—which had the lead role in strategic nuclear deterrence—was allotted a larger share of the defense budget. This pattern continued until the late 1960s. After that, there was less difference in service percentages of the budget. (Percentages shown above do not include a small portion held back for use by the Defense Department.)*

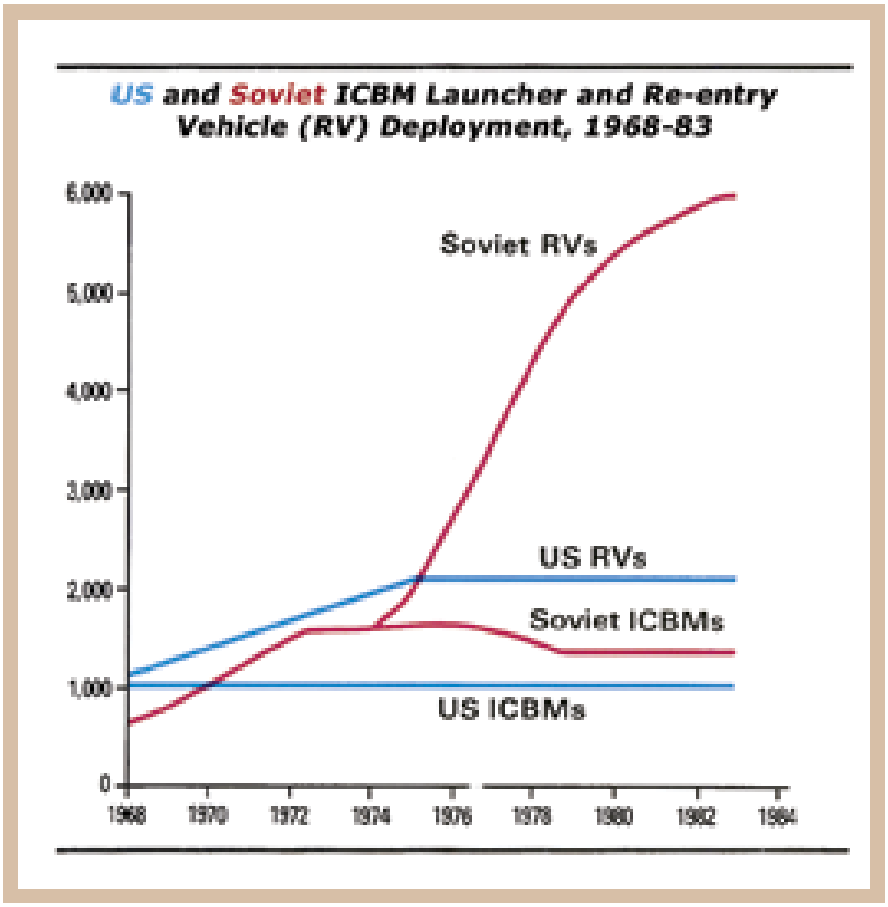



*Source: http://www.strategic-air-command.com*



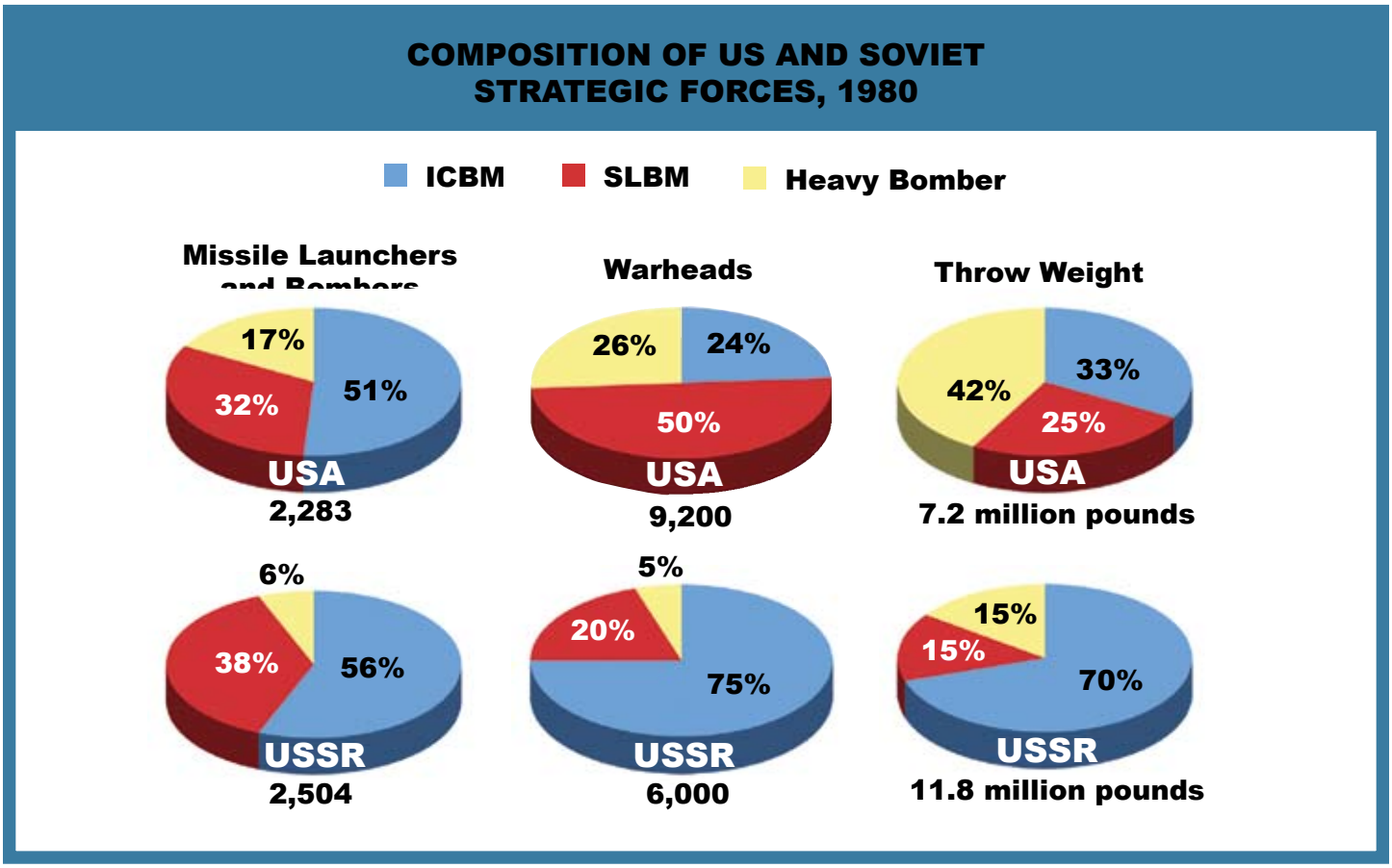

*In 1964, the number of ICBMs on alert in SAC pulled even with the number of bombers on alert, then moved ahead and stayed ahead.*

*Source: Col. Mike Worden, USAF.* Rise of the Fighter Generals, *1998, p. 124.*




*By 1970, the USSR caught up with and passed the US in number of ICBMs. After launcher totals were capped by SALT I, the Soviets turned to increasing the number of re-entry vehicles to expand their advantage.*

*Source:* Soviet Military Power, 1983




*By 1980, the United States—once ahead in all nuclear force categories—was ahead only in number of warheads and trailed the Soviet Union in launchers and megatonnage.*

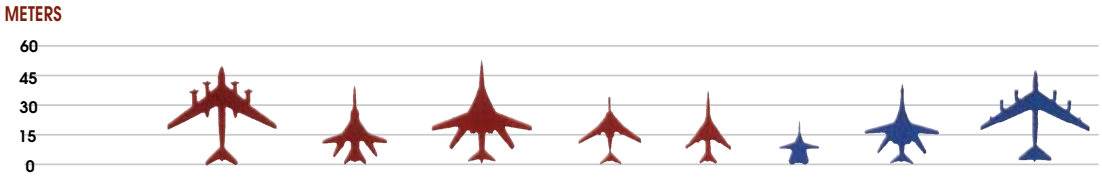
*Source: Defense Secretary Harold Brown, FY 1981 Report to Congress.*

**Six Snapshots of Soviet Force**

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 |
|---|---|---|---|---|---|---|
| **ICBM** | 1,398 | 1,398 | 1,396 | 1,418 | 1,386 | 1,406 |
| **SLBM** | 981 | 982 | 983 | 967 | 978 | 1,030 |
| **Bombers** | 850 | 846 | 847 | 862 | 888 | 860 |
| **Tac aircraft** | 6,260 | 6,135 | 6,300 | 5,200 | 5,170 | 5,170 |
| **Ground div** | 194 | 199 | 201 | 211 | 211 | 214 |

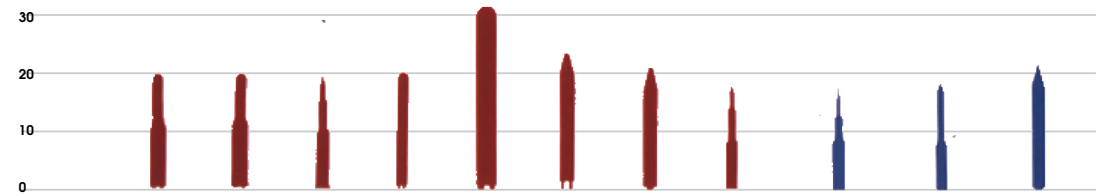
Source: *Soviet Military Power*, annual editions

## Soviet/US Bombers, 1989




| | Tu-95 BEAR | BACKFIRE | BLACKJACK | Tu-16 BADGER | Tu-22 BLINDER | FB-111 | B-1B | B-52G/H |
|---|---|---|---|---|---|---|---|---|
| UNREFUELED COMBAT RADIUS (KM) | 6,400 | 4,000 | 7,300 | 3,100 | 2,400 | 1,480 | 7,500 | 8,000 |
| MAX SPEED (MACH) | 0.8 | 2.0 | 2.0 | .85 | 1.4 | 2.5 | 1.25 | 0.9 |

## Soviet/US ICBMs, 1989




| | SS-11 MOD 2 | SS-11 MOD 3 | SS-13 MOD 2 | SS-17 MOD 3 | SS-18 MOD 4/5 | SS-19 MOD 3 | SS-24 MOD 1/2 | SS-25 | MINUTEMAN II | MINUTEMAN III | PEACEKEEPER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NUMBER DEPLOYED | 380 | | 60 | 110 | 308 | about 320 | about 58 | 170 | 450 | 500 | 50 |
| WARHEADS | 1 | 3 MRVs | 1 | 4 MIRVs | 10+ MIRVs | 6 MIRVs | 10 MIRVs | 1 | 1 | 3 | UP TO 10 |
| MAX RANGE (KM) | 13,000 | 10,600 | 9,400 | 10,000 | 11,000 | 10,000 | 10,000 | 10,500 | 12,500 | 11,000+ | 11,000+ |
| LAUNCH MODE | HOT | HOT | HOT | COLD | COLD | HOT | COLD | COLD | HOT | HOT | COLD |

**Source:** ***Soviet Military Power, 1989***

## NATO vs the Pact: In Place and Fully Reinforced, 1987

| | NATO | | Warsaw Pact | |
|---|---|---|---|---|
| | in place | reinforced | in place | reinforced |
| **Fighter-interceptors** | 1,100 | 1,140 | 2,700 | 3,100 |
| **Bomber, fighter bomber, ground attack aircraft** | 2,200 | 3,850 | 3,000 | 3,450 |
| **Recon aircraft** | 270 | 370 | 450 | 570 |
| **Ground divisions** | 91 | 121 | 132 | 229 |
| **Main battle tanks** | 21,100 | 25,900 | 32,400 | 53,100 |
| **Attack helicopters** | 600 | 1,300 | 1,000 | 1,250 |
| **Artillery** | 15,300 | 18,500 | 23,800 | 44,000 |

**Source:** ***Soviet Military Power, 1988***

| Soviet/Russian Nuclear Forces, Then and Now | | |
|---|---|---|
| | September 1990 | January 2005 |
| **ICBMs** | | |
| **SS-11** | 326 | 0 |
| **SS-17** | 40 | 0 |
| **SS-18** | 308 | 110 |
| **SS-19** | 300 | 140 |
| **SS-24 (silo)** | 56 | 0 |
| **SS-24 (rail)** | 33 | 15 |
| **SS-25** | 288 | 306 |
| **SS-27 (silo)** | 0 | 40 |
| **SLBMs** | 940 | 292 |
| **Bombers** | 162 | 78 |
| | | *Source: Arms Control Association* |

***When the Soviet Union expired in 1991, there were strategic nuclear weapons in Russia, Belarus, Kazakhstan, and Ukraine. All remaining weapons have been transferred to Russia. The Russians are steadily eliminating the older ICBMs and plan a force consisting of silo-based and mobile SS-27 Topol-Ms.***

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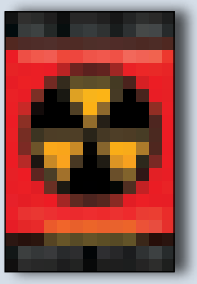

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