U.S. Presidents

McKinley · T. Roosevelt · Taft · Wilson · Harding · Coolidge · Hoover · F.D. Roosevelt · Truman · Eisenhower · Kennedy · Johnson · Nixon · Ford · Carter · Reagan · Bush · Clinton · G.W. Bush

Wars

Conflicts
Crises
Battles

- Philippine Insurrection
  - Boxer Rebellion
- U.S. Troops sent to Cuba
- U.S. Marines intervene in Honduras
- U.S. Troops sent to Nicaragua
- More Rebellion (Philippines)
- U.S. Marines intervene in Nicaragua
- Aeronautical Section of the Signal Corps
- Aviation Section (Signal Corps)
- United States Army Air Service
- WORLD WAR I
  - More Rebellion (Philippines)
  - Luxitania sunk by U-Boat
  - U.S. Marines intervene in Haiti
  - General Pershing pursues Pancho Villa into Mexico
  - German saboteurs blow up H.J. munitions dump
  - U.S. Troops occupy Dominican Republic
  - 1st U.S. casualty from U-Boat
  - U.S. enters World War I
- SOLDIERS' BEV
  - First use of aircraft in war
- United States Army Air Forces
- U.S. Troops sent to Nicaragua
- SINO-JAPANESE CONFLICT
- SPANISH CIVIL WAR
  - Japanese attack USS Panay in Chinese waters
- WORLD WAR II
  - Pearl Harbor
  - Guadalcanal
  - Invasion of North Africa
  - MacArthur returns to Philippines
  - D-Day
  - Battle of the Bulge
  - Iwo Jima
  - Invasion of Sicily
  - Hiroshima/Nagasaki
  - Battle of Bismarck Sea
  - V-E Day
  - V-J Day
- FRENCH-INDOCHINA WAR
  - Dien Bien Phu Falls
  - Soviets invade Hungary
  - U.S. Marines land in Beirut
  - Taiwan Crisis
- PALESTINIAN WAR
  - Berlin Airlift
- KOREAN WAR
- SUEZ CRISIS
- CUBAN CIVIL WAR
  - Cuba War
  - Cuban Missile Crisis
  - U-2 Shot down over Soviet Union
- VIETNAM WAR
  - Bay of Pigs
  - Berlin Crisis
  - Six-Day War
  - USS Pueblo Incident
  - Soviets invade Czechoslovakia
  - Yom Kippur War
  - USS Mayaguez incident
- IRAN HOSTAGE CRISIS
  - Iran Hostage Crisis
  - Abortive Iran Rescue Raid
  - Israeli planes destroy Iraqi reactor
  - USSR F-14s shoot down Libyan MiGs
  - Marines bombed in Beirut
  - U.S. Troops intervene in Grenada
- TERRORISM
  - Libyan Airstrike
  - Refloagging of Kuwaiti Tankers
- IRAN-IRAQ/IRAQ-I IRAN
  - USS Stark hit by Exocet missile
- SOVIET INTERVENTION IN AFGHANISTAN
- COLD WAR
  - U.S. Troops intervene in Somalia
  - Operations Southern Watch and Northern Watch
  - U.S. Troops intervene in Panama
  - Berlin Wall falls
  - Official breakup of Soviet Union
  - U.S. Troops intervene in Haiti
  - U.S. Troops intervene in Afghanistan (Enduring Freedom)
  - Khobar Towers, in Saudi Arabia
  - Twin Towers and Pentagon Attack
- BALKANS AIR CAMPAIGNS

Aerospace Events

Significant Milestones in Aerospace History

- First U.S. military aircraft delivered
- First takeoff from a ship
- First landing on a ship
- First catapult launch
- Wright Brothers' Flight
- Kitty Hawk-Dec 17, 1903
- First scheduled Air Mail delivery
- Billy Mitchell sinks Battleship Ostfriesland
- Alaska flight in DH4s, New York to Nome
- First non-stop coast-to-coast flight
- First aerial circumnavigation of the globe
- Byrd flies over North Pole
- Lindbergh flies solo across Atlantic
- Jimmy Doolittle makes first all-instrument flight
- Alaska flight in B-10s, DC to Fairbanks
- Hindenburg burns
- Doolittle's Raid on Tokyo
- AAF's first strategic bombing of Europe
- V-1 Cruise missile
- V-2 Ballistic missile
- First land-based bombing of Japan
- First flight of P-59, AF's first jet
- First jet aircraft dogfight
- British explode A-bomb
- U.S. explodes first H-bomb
- Soviets explode H-bomb
- Soviets explode A-bomb
- Soviets test ICBM
- Dyna-Soar Project
- Sputnik
- First Atlas launch
- Explorer 1
- NASA created
- X-15 First flight
- First Titan launch
- First Saturn I launch
- MERCURY FLIGHT PROGRAM
- French explode A-bomb
- First man in space-Cosmonaut Yuri Gagarin
- First American in space-Alan Shepard
- First manned orbital spaceflight-Cosmonaut Gherman Titov
- John Glenn orbits Earth
- First multi-crew spaceflight-Voskhod I
- First woman in space-Cosmonaut Valentina Tereshkova
- Chinese explode A-bomb
- First Saturn V Launch
- First Spacewalk-Voskhod II
- GEMINI FLIGHT PROGRAM
- APOLLO FLIGHT PROGRAM
- First man on the moon-Apollo XI
- First kinetic kill satellite intercept-Soviet ASAT
- DEYLAB LAUNCHES
- India explodes A-bomb
- Chinese explode H-bomb
- SPACE SHUTTLE FLIGHT PROGRAM
- Space Shuttle Columbia makes first orbital flight
- First American woman in space-Sally Ride
- First untethered spacewalk-Bruce McCandless
- First recovery and repair of satellite in space-Solar Max
- U.S. achieves kinetic kill of ICBM RV in space-Homing Overlay Experiment
- First Satellite recovery and return to earth-Discovery/Palapa B and Westar 6
- Voyager aircraft circles globe unrefueled
- Cosmonauts Titov and Manarov spend one year in orbit aboard MIR
- Solar optical telescope
- Robbie space telescope
- Patriots intercept SCUDs in Gulf War
- Russian/U.S. spaceflights
- CHALLENGER EXPLODES
- SPACE SHUTTLE RETURNS TO FLIGHT
- USAF Col. Eileen Collins, who had been the first woman space shuttle pilot in 1995, became the first woman space shuttle mission commander.
- First permanent occupation of space (International Space Station mission)
- Space Station construction begun

Technology

Significant Advances

- Transatlantic radio (morse code)
- Triode
- Diode
- Gnome rotary engine aircraft
- Wright Brothers' Flight
- Kitty Hawk-Dec 17, 1903
- Vacuum Radio Tube
- Photoelectric Cell
- Superconductivity discovered
- Autopilot (Gyroscope)
- Transatlantic Telephone
- Air-to-Ground Radio
- Air-to-Air Radio
- "Liberty" 12-cylinder Aircraft engine
- Magnetron
- Radio Navaids
- Liquid-fueled Rockets
- Television
- Wright J-5 "Whirlwind" radial engine
- Klystron
- Ground-based Radar
- Airborne Radar
- R-2800 radial engine
- Jet Aircraft (centrifugal flow Turbojet)
- Nuclear Reactor
- Axial-flow Turbojet
- Pulse-jet Missile
- First Rocket to escape atmosphere
- Turboprop engine
- First explosion of an atomic device
- Afterburning Turbojets
- Sound Barrier broken by Capt. Chuck Yeager
- Transistor
- Anti-iced engines
- Maser
- Experimental Ramjet aircraft
- (V-1 "Buzz Bomb")
- J79 engine
- J57 engine
- Much 2 powerplant
- Inertial Navigation
- Turbofan engines
- Much 3 powerplant
- Satellite communications
- Integrated circuits
- Laser
- Modern Cryogenics leads to development of Infrared technology
- Fiber Optics
- Large-scale integrated circuits
- Particle beams
- Very large-scale integrated circuits
- Ring-laser Gyros
- Low-observable (stealth) technology
- Airborne laser lab
- High maneuverability research started with X-29
- Earth penetration testing for nuclear devices
- Smart skins
- Advanced thrust vectoring
- Integrated cockpit/avionics
- Integrated high-performance turbine engine technology
- Super cruise engine
- All-composite Airframes
- Info warfare

Air Force Doctrine and Organization

- Primary purpose of aviation is observation for infantry and artillery
- War broadened use of airpower: beginning of air combat to deny enemy reconnaissance; bombing and strafing of enemy ground forces
- Billy Mitchell's fight for aviation independence highlighted by his court-martial
- U.S. Army Air Corps formed
- WO Reg 440-15: purpose of aviation is to destroy enemy aircraft and attack enemy ground forces. Controlled by ground commander
- WO Reg 440-15: Air units may have some role beyond land battle
- General Headquarters (GHQ) Air Force formed. Organized for centralized training and concentrated employment. Controlled by theater commander in war.
- WD FM 1-5: Strategic bombing accepted as a valid function of air power
- Airmen's "Declaration of Independence," FM100-20: land and air forces are co-equal and interdependent; air superiority is first requirement in battle. Air power centralized in a theater, controlled by Air Commander.
- General Arnold announces plan to destroy Luftwaffe with Air Power, to make European invasion as choice as possible
- 20th Air Force activated (First independent strategic force)
- SAC, TAC, and ADC formed
- USAF Formed
- Army Air Forces (USAAF) formed
- Air Force Academy founded
- AFM 1-2: Three primary tasks
  1- Control the Air
  2- Attack the enemy's heartland
  3- Attack peripheral targets
- AFM 1-2: Recognition of developments in missiles and space by replacing "Air Power" with "Aerospace Power"
- AFSC formed
- AFM 1-1: Introduces policy of flexible response
- Army/Air Force Close-Air-Support agreement
- AFM 1-1: Recognized need for more deterrence from general purpose forces. Introduced "Role of Air Forces in Space"
- ADC stands down
- Air Force doctrine AFM 1-1: philosophy of sufficiency, strategic triad highest defense priority. Introduced combined doctrine, centralized control and decentralized execution.
- Space Command formed
- U.S. Army/USAF agree on Airland Doctrine
- Packard Commission
- Goldwater-Nichols
- The Air Campaign by Col John Warden published
- Global Reach-Global Power
- AFSOCOM formed
- PEOs established
- Air Combat and Air Mobility commands formed (SAC, TAC, and MAC stand down)
- AFMC formed (merged AFSC and AFLC)
- Base reduction and closing
- Global Engagement
- Six AF Core Competencies
- Joint Vision 2010
- Air Force 50th Anniversary
- Headquarters Air Force Doctrine Center (HQ AFDC) established at Maxwell Air Force Base, Alabama
- Aerospace Expeditionary Forces established

Aircraft

Significant AAF and USAF Aircraft Development

- Wright Military Flyer
- Curtiss Model D
- Burgess Model H
- Curtiss JN-4
- DH-4
- Martin MB-2
- Thomas-Morse MB-3
- P-1
- B-2
- C-1
- C-2
- A-3
- P-12
- P-26
- B-10
- P-35
- C-33
- A-17
- B-17
- P-25
- C-47
- P-61
- B-24
- A-26
- P-51
- B-25
- B-29
- B-26
- C-87
- C-45
- C-46
- P-40
- P-38
- P-47
- C-54
- C-97
- B-45
- B-36
- B-50
- B-52
- B-47
- B-57
- B-58
- P-54
- P-86
- P-84
- B-17
- C-131/-29
- C-119
- C-124
- B-47
- F-80
- F-89
- B-19
- C-121
- R-4
- R-5
- F-100
- B-2
- C-130
- C-133
- F-102
- F-104
- F-101
- F-105
- F-106
- R-43
- C-123
- KC-135
- B-58
- F-39
- F-4
- CH-3
- EB-1
- YF-12
- F-5
- C-141
- SR-71
- F-111
- CH-53
- C-5
- C-9
- A-7D
- F-15
- A-10
- AWACS
- F-16
- KC-10
- F-117
- C-21A
- B-18
- H6-60
- E-8A
- C-17
- VC-25A (AF 1)
- F-22 (1st Flight)
- B-2
- ABL (Milestone I)
- T-6A (1st Flight)
- JSF (Concept Demo)
- Predator (1st Flight)
- Global Hawk (1st Flight)
- The Defense Department chose Lockheed Martin over Boeing to build the Joint Strike Fighter, designated the F-35
- Boeing unveiled its X-45A Unmanned Combat Air Vehicle

Munitions

Technology Development

- Hand-dropped bombs
- Aerial torpedo
- Aerial Machine gun
- Bomb release racks
- Leaflet bombs
- Bomb sights
- Interrupter gear (allowed firing machine gun through propeller)
- Aerial bombing
- High-explosives
- Air-delivered sea mines
- ROX explosives
- 500-lb bombs
- Dive-bombing
- Norden bombsight
- Airborne cannon
- Air-Delivered land mines
- 4,000-lb bombs
- Napalm
- Refurbed bombs
- Target marking bombs
- Radar bombing
- Cluster bombs
- Shaped charge warheads
- Ship bombing
- 22,000-lb bombs
- Radio Proximity fuze
- Air-launched rockets
- Radar-controlled glide bomb
- Radio-controlled glide bomb
- Hardened targets weapons
- Guided air-to-air rockets
- Radar-guided air-to-air missile
- IR-guided air-to-air missile
- Radar-controlled air-to-ground missile
- Gatling-type aircraft gun
- Antiradiation missile
- TV-guided glide bomb
- Runway-cratering munition
- Laser-guided bomb
- TV-guided air-to-ground missile
- Depleted Uranium (nonexplosive) gun ammo
- IR-guided air-to surface missile
- IR-guided glide bomb
- Inertial guidance technology demo
- Smart submunitions and mines
- Autonomous guidance for conventional weapons
- Sensor-fused munitions
- GPS guidance concept demo
- Hypersonics
- AGM-154A launched for first time against an Iraqi air defense site
- First use of a passenger-carrying aircraft as a Weapon of Mass Destruction - introduction of Boeing 767 (AR-R) +
- First use of thermobaric munition (BLU-118/B) in combat +
- Miniature munitions technology
- Directed energy weapons

Nuclear Weapons/ Missiles

Major U.S. Development

- BEGRIUS I
- AIR-2 Genie
- B-29
- B-43
- SNARK
- ATLAS D/D
- ROMARC
- Polaris A-1
- THOR
- ATLAS F
- JUPITER
- AIM 26 B
- Polaris A-2
- Pershing 1A
- ATLAS F
- Minuteman 1
- B-53
- TITAN I
- TITAN II
- ADM-20 Rovering
- Polaris A-3
- Minuteman II
- B-61
- Minuteman III
- Poseidon C-3
- AGM-69 SRAM
- SRAM
- LANCE
- Trident C-4
- ALCM-B
- GLCM
- SLCM
- B-83
- Pershing II
- Peacekeeper
- Trident D-5
- AGM-129

Conventional Weapons

USAF Development

- AIM-4 Falcon
- AIM-9 Sidewinder
- AIM-7 Sparrow
- AGM-12 Bullpup
- M-61 20mm GUN
- AGM-45 Shrike
- CBU-24 (Modern cluster bomb with over 20 more types plus variants still being produced)
- AGM-79 Standard ARM
- MK-20 Rockeye
- Paveway I LGB
- AGM-65 TV Maverick
- GAU-8 30mm GUN
- Paveway II LGB
- GBU-15
- GPU-5 30mm Gun Pod
- AGM-84 Harpoon
- Paveway III LLLGB
- AGM-65 IIR Maverick
- Durandal
- AGM-88 Harm
- CBU-89 Gator
- CBU-97 SFW
- GBU-15 (TV) / GBU-15 (IIR)
- Conventional ALCM
- Improved 2,000-lb Bomb
- GBU-27
- GBU-28
- AGM-130
- AGM-142
- AGM-120 AMRAAM
- CBU-97 SFW
- AGM-9X (LRIP)
- GBU-31/32
- AGM-154
- AGM (USC on B-2)
- WCMD
- AGM-150

NOTE: Weapon systems dates in the modern era are initial operational capability dates except as noted

United States Air Force

Secretaries of the Air Force

W. Stuart Symington	1947-1950
Thomas K. Finletter	1950-1953
Harold E. Talbott	1953-1955
Donald A. Quarles	1955-1957
James H. Douglas, Jr.	1957-1959
Dudley C. Sharp	1959-1961
Eugene M. Zuckert	1961-1965
Harold Brown	1965-1969
Robert C. Seamens, Jr.	1969-1973
John L. McLucas	1973-1975
Thomas C. Reed	1976-1977
John C. Stetson	1977-1979
Hans Mark	1979-1981
Verne Orr	1981-1985
Russell A. Rourke	1985-1986
Edward C. Aldridge, Jr.	1986-1988
Donald B. Rice	1989-1993
Shiela E. Widnall	1993-1997
F. Whitten Peters (acting)	1997-1999
F. Whitten Peters	1999-2001
Dr. James G. Roche	2001-

Civilian Air Chiefs

John D. Ryan	1918
F. Trubee Davison	1926-1932
Robert A. Lovett	1941-1946
W. Stuart Symington	1946-1947

Military Air Chiefs

Capt Charles D. Chandler	1907-1910
Capt Arthur S. Cowan	1910-1911
Capt Charles D. Chandler	1911-1912
Lt Henry H. Arnold	1912-1913
Col Samuel Reber	1913-1916
Brig Gen George O. Squier	1916-1917
Lt Col John B. Benner	1917
Brig Gen Benjamin D. Foulois	1917
Brig Gen Alexander L. Dade	1917-1918
Maj Gen William L. Kenly	1918-1919
Maj Gen Charles Menoher	1919-1921
Maj Gen Mason Patrick	1921-1927
Maj Gen James E. Fechet	1927-1931
Maj Gen Benjamin D. Foulois	1931-1935
Maj Gen Oscar Westover	1935-1938
Gen Henry H. Arnold	1938-1946
Gen Carl Spaatz	1946-1947

U.S. Air Force Chiefs of Staff

Gen Carl A. Spaatz	1947-1948
Gen Hoyt S. Vandenberg	1948-1953
Gen Nathan F. Twining	1953-1957
Gen Thomas D. White	1957-1961
Gen Curtis E. LeMay	1961-1965
Gen John P. McConnell	1965-1969
Gen John D. Ryan	1969-1973
Gen George S. Brown	1973-1974
Gen David C. Jones	1974-1978
Gen Lew Allen, Jr.	1978-1982
Gen Charles A. Gabriel	1982-1986
Gen Larry D. Welch	1986-1990
Gen Michael J. Dugan	1990
Gen Merrill A. McPeak	1990-1994
Gen Ronald R. Fogleman	1994-1997
Gen Michael E. Ryan	1997-2001
Gen John P. Jumper	2001-

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