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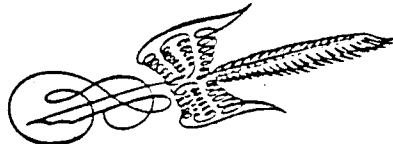
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CHRONOLOGY



OF SIGNIFICANT AEROSPACE EVENTS



TIP To Newspaper Editors

This is your clip and paste Chronology of Significant Aerospace Events. You are encouraged to use the dates as "filler items" in your newspaper throughout the Air Force's 25th Anniversary Year. For offset papers, they should fit into any standard 11 pica column. *Beginning with the year 1947, reproducible photos of Air Force people and equipment in action are also provided. These are keyed to the significant dates as appropriate.* The significant dates set off by rules relate to the photos appearing on the same or following page. Information provided in the dated items may be used in the preparation of photo captions. *If you wish to illustrate significant events occurring prior to 1947, Photo Pack 2, "Historical Aircraft," recently reissued should serve the purpose.* Helpful also will be Photo Pack 5 "Aircraft and Missiles" to be reissued later this year. For your convenience, we have also provided extra one- and two-column heads of the 25th Anniversary Logo.

CHRONOLOGY OF SIGNIFICANT AEROSPACE EVENTS March 1903—December 1971

1903

March 23, 1903: First Wright brothers airplane patent based on their 1902 glider, filed in America.

August 8, 1903: The Langley gasoline engine model plane was successfully launched from a catapult on a houseboat.

December 8, 1903: Second and last trial of Langley airplane, piloted by Charles M. Manly, was wrecked in launching from a houseboat on the Potomac River.

December 14, 1903: The world's first powered airplane flight was made off Kill Devil Hill, Kitty Hawk, N.C., by Wilbur Wright—105 feet in 3.5 seconds. Because the plane crashed soon after takeoff, the flight is not considered either as sustained or controlled, as are the December 17 flights.

December 17, 1903: First sustained, controlled powered airplane flights were made by Orville and Wilbur Wright at Kitty Hawk, N.C. The fourth and longest flight of the day was 852 feet in 59 seconds.

1905

January 18, 1905: The Wright brothers opened negotiations with the U.S. Government to build an airplane for the Army.

October 5, 1905: Orville Wright flew 24.2 miles in 38 minutes 3 seconds at Dayton, Ohio, establishing a world distance and duration record.

1907

March 16, 1907: The Wright brother's project for an Army airplane was renewed by Cortland F. Bishop, president of Aero Club of America, through President Theodore Roosevelt. This led to the first airplane contract between the Army and the Wright brothers.

August 1, 1907: The Aeronautical Division was established in the Office of the Chief Signal Officer of the Army. Under Capt. Charles DeF. Chandler, it was to have charge of all matters pertaining to military ballooning, air machines, and kindred subjects.

November 30, 1907: The first airplane company in the U.S. was formed—the Curtiss Motor Vehicle Company.

December 5, 1907: Wilbur Wright appeared before the Board of Ordnance and Fortification and offered the U.S. Government an airplane, capable of carrying two people, for \$25,000.

1908

February 10, 1908: The first Army airplane contract with the Wright brothers was signed. (Herring and Scott were also awarded contracts but failed to produce planes.)

May 14, 1908: The first passenger flight in history took place in the Wright plane at Kitty Hawk in preparation for delivery of a Government airplane; Wilbur Wright piloted the machine and Charles Furnas, an employee, was the first passenger.

May 19, 1908: Lt. Thomas E. Selfridge, first soldier to fly a heavier-than-air machine, piloted the airplane White Wing (second of Dr. Alexander Graham Bell's Aerial Experiment Association planes) at Hammondsport, N.Y.

July 4, 1908: The first American air trophy (offered by the Scientific American for the first official flight of 1 kilometer) was won by Glenn H. Curtiss at Hammondsport, N.Y., in the June Bug, in 1 minute 42.5 seconds.

July 6, 1908: An Aeronautical Board of the Signal Corps was appointed for "conducting tests of dirigibles, balloons, and airplanes. . . ."

September 3, 1908: First test flight of Army flying machine made at Ft. Myer, Va., by Orville Wright.

September 9, 1908: Orville Wright broke all airplane duration records when he flew for 57 minutes and 25 seconds, making 57 circuits of the field at Ft. Myer, Va., at over 100 foot altitude.

September 9, 1908: Lt. Frank P. Lahm became the first Army passenger carried in the Wright Flyer at Ft. Myer, Va.

September 17, 1908: Lt. Thomas E. Selfridge, flying as a passenger with Orville Wright, was killed during a trial flight of the Wright Flyer at Ft. Myer, Va., when the plane crashed. Wright was seriously injured. This was the world's first fatal airplane accident.

1909

June 17, 1909: Special Congressional gold medals were presented to Orville and Wilbur Wright.

June 27, 1909: Three New York newspapers—the Sun, Times, and Herald—printed the first advertisements in the world of an airplane for sale.

July 25, 1909: Louis Bleriot, of France, became the first person to fly across the English Channel.

July 27, 1909: Orville Wright, with Lt. Frank P. Lahm as passenger, made a new 2-man endurance record of 1 hour 12 minutes 40 seconds, fulfilling the conditions of 1 hour's flight with a passenger, in the first official test flight of the Army's first airplane.

July 30, 1909: The second test of the Army Wright plane was completed: a 10-mile cross-country flight over a stipulated course from Ft. Myer, Va., to Alexandria, Va., and back, at a speed of 42.583 m.p.h., for which the Wrights received a bonus of \$5,000 (10 percent of the base price of \$25,000 for each mile per hour over 40), making the purchase price \$30,000. The plane was formally accepted on 2 August.

October 7, 1909: Glenn H. Curtiss became the first American to hold an FAI airplane certificate.

October 23, 1909: Lt. Benjamin D. Foulois took his first flying lesson from Wilbur Wright at College Park, Md.

October 26, 1909: Lt. Fred-eric E. Humphreys became the first Army officer to solo in the Army's first airplane, at College Park, Md. A few minutes later Lt. Frank P. Lahm became the second.

October 27, 1909: First woman airplane passenger in the U.S.—Mrs. Ralph H. Van Deman—made a 4-minute flight at College Park, Md., with Wilbur Wright at the controls.

November 3, 1909: Lt. George C. Sweet, USN, as a passenger in the first Army Wright airplane, became the first Navy officer to fly.

November 22, 1909: The Wright Company was incorporated, with \$1,000,000 capital stock, to manufacture flying machines.

1910

January 19, 1910: Lt. Paul W. Beck, flying with Louis Paulhan in his Farman at the Los Angeles Flying Meet, dropped three two-pound sandbags, simulating bombs, in an effort to hit a target, the first such experiment by an Army officer.

February 10, 1910: The Board of Regents of the Smithsonian Institution awarded the first Langley Medal to the Wright brothers in Washington, D.C., "for advancing the science of aerodynamics in its application to aviation by their successful demonstrations of the practicability of mechanical flight by man."

March 2, 1910: Lt. Benjamin D. Foulois began solo flying at Ft. Sam Houston, Tex.

March 19, 1910: Orville Wright opened the first Wright Flying School at Montgomery, Ala., on the site which later became Maxwell Field.

May 25, 1910: Orville and Wilbur Wright flew together for the first time, at Dayton.

July 9, 1910: First aviator to fly to height of one mile, Walter Brookins, attained altitude of 6,175 feet in Wright biplane at Atlantic City, N.J., winning \$5,000 Atlantic City Aero Club prize.

August 4, 1910: Elmo N. Pickerill claimed to have made first plane-to-ground-to-plane radiotelegraphic communication in America, during a solo flight in a Curtiss pusher between Mincola and Manhattan Beach.

September 2, 1910: The first American woman pilot, Blanche Scott, soloed over the Keuka Lake front field of the Curtiss Company, Hammondsport, N.Y., but did not receive an FAI certificate.

October 11, 1910: Former President Theodore Roosevelt became the first President to fly, as a passenger in a St. Louis flight.

November 14, 1910: First takeoff from a Navy ship made by Eugene Ely from a platform built on the deck of the U.S.S. *Birmingham* anchored in Hampton Roads, Va.

1911

January 15, 1911: At the San Francisco Air Meet (Tanforan Race Track) Lt. Myron S. Crissy, flying with P. O. Parmalee, dropped a live bomb designed by himself over the side of a Wright airplane on a target below.

January 16, 1911: Lt. E. E. M. Kelly, Infantry, flew with Walter Brookins in a Wright plane at 2,000 feet through the San Bruno Hills, Calif., in the first photo reconnaissance flight to locate troops (who were not discovered).

January 21, 1911: Lt. Paul W. Beck made the Army's first radiotelegraphic transmission from an airplane. He used a transmitter of his own design, in Parmalee's Wright plane, at an altitude of 100 feet, to a station at Selfridge Field, Mich.

January 26, 1911: Glenn H. Curtiss flew a seaplane from the water at San Diego, the first time this had been done in the United States.

1912

January 27, 1911: At an Aero Club exhibition in San Diego, Lt. T. G. Ellyson, USN, Curtiss student, took off in a Curtiss "grass cutter" plane (a ground plane, not supposed to fly) and became the first Naval aviator.

February 1, 1911: First licensed aircraft manufacturer in the United States, Burgess and Curtis of Marblehead, Mass., was licensed by the Wright Company.

February 2, 1911: An exhibition of the Moisant International Aviators, formed to give aerial exhibitions, opened at San Antonio. Flying Bleriot, they cooperated with Brig. Gen. Ralph W. Hoyt, commanding Ft. Sam Houston, and Lt. B. D. Foulois in work on problems of reconnaissance, antiaircraft fire, and bombardment.

March 3, 1911: Lt. B. D. Foulois and civilian pilot P. O. Parmalee made a 106-mile non-stop flight from Laredo to Eagle Pass, Tex., in a Collier Wright to prove to ground forces the usefulness of the airplane. Messages were dropped and radiotelegraphic messages received.

March 3, 1911: First appropriation for Army air operations—\$25,000—authorized for fiscal year 1912.

March 13, 1911: Capt. W. Irving Chambers, USN, was assigned to the Bureau of Navigation to devote exclusive efforts to naval aeronautics.

March 17, 1911: The first military-type Model D Curtiss plane was demonstrated before Army and Government officials at Potomac Park, Washington, D.C. This was the first Curtiss plane bought by the Army.

March 31, 1911: About this date the Missouri National Guard Signal Corps established an air section and members were taught flight and ballooning—probably the first unit of its kind.

April 11, 1911: Army's first permanent flying school was inaugurated at College Park, Md., with a request that four hangars be constructed.

April 18, 1911: Lt. John Rodgers, USN, first Wright School Navy pilot, soloed at Dayton, Ohio, becoming Naval Aviator No. 2.

April 27, 1911: The first Army Curtiss and the second Army Wright (both pushers) were accepted at San Antonio, Tex., by the Signal Corps.

May 8, 1911: The first Navy airplane, A-1, an amphibian, ordered from Glenn Curtiss. This has been officially proclaimed the birthday of naval aviation.

May 13, 1911: Lts. H. H. Arnold and T. D. Milling completed their flying training at napolis by Orville Wright.

July 19, 1911: First Navy first Wright School Army pilots. Wright airplane delivered to An-Dayton, Ohio, to become the

August 2, 1911: Harriet Quimby became the first woman pilot in the U.S. to obtain an FAI certificate; she received No. 37 at Mineola, Long Island, N.Y.

September 4, 1911: Lt. T. D. Milling became the first Army officer to fly at night when he landed his plane by the light of gasoline flares at the Boston Meet after participating in the 160-mile tristate air race.

September 23, 1911: Earle L. Ovington, flying a Queen monoplane, became America's first airmail carrier to cover a set route (Nassau Boulevard, N.Y., to Mineola, N.Y.). He was appointed Air Mail Pilot No. 1 by the Postmaster General.

February 17, 1912: The first pilot physical examination was published by the U.S. Army.

February 23, 1912: First official recognition of the rating "Military Aviator", appeared in War Department Bulletin No. 2.

June 5, 1912: Lt. Col. C. B. Winder, Ohio National Guard, became the first National Guard pilot. He was taught to fly at the Army Aviation School.

June 7, 1912: First firing in the U.S. of a machinegun from an airplane. The gun, a ground type designed by Col. Isaac N. Lewis, was fired by Capt. Charles DeF. Chandler, from a Wright B plane, piloted by Lt. T. D. Milling, at College Park, Md.

June 7, 1912: Lt. John P. Kelly, MRC, first air medical officer assigned to Signal Corps aviation field, College Park, Md.

June 14, 1912: ~~Capt. Vernon~~ **Burge** became the Army's first enlisted pilot.

June 21, 1912: Tiny Broadwick, jumping from Glenn L. Martin's plane near Los Angeles, became the first woman to make a parachute jump in the U.S.

July 5, 1912: Capt. Charles DeF. Chandler and Lts. T. D. Milling and H. H. Arnold became the first fliers to qualify as "Military Aviators."

August 10, 1912: At Bridgeport, Conn., from 10 through 17 August, Signal Corps planes for the first time took part in Army maneuvers. Two planes were piloted by Lts. T. D. Milling and B. D. Foulois.

September 28, 1912: Cpl. Frank S. Scott, first enlisted fatality in Signal Corps aviation, was killed in the crash of an airplane in which he was a passenger with Lt. L. C. Rockwell (also killed) at College Park, Md.

November 5, 1912: First artillery adjustments directed from a plane begun at Ft. Riley, Kans., by Lts. H. H. Arnold, pilot and Follett Bradley, observer.

November 27, 1912: The Signal Corps accepted from the Curtiss factory, Army's first flying boat (No. 15), a Curtiss Model F.

1913

February 11, 1913: The first bill for a separate aviation corps, H.R. 28728, was introduced in Congress by Representative James Hay of W. Va. It failed to pass.

March 2, 1913: First flying pay authorized—35 percent over base pay for officers detailed on aviation duty.

March 5, 1913: Field Order No. 1, Hq. First Aero Squadron in the field near Texas City, Tex., stated: "The First Aero Squadron is hereby organized." The organization was provisional.

March 31, 1913: Lt. W. C. Sherman, riding as a passenger with Lt. T. D. Milling on a non-stop cross-country flight from San Antonio to Texas City, made the first Army aerial map.

May 10, 1913: Air bombing in America was inaugurated when Didier Masson began a series of bombing raids for Mexican Gen. Alvarado Obregon against Mexican Federal gunboats in Guaymas Bay.

May 27, 1913: Issuance of GO No. 39 provided that Army officers who qualified as Military Aviators would receive a Military Aviator's certificate and badge. In all 24 qualified.

June 20, 1913: Ensign W. B. Billingsley became the first Naval aviator killed in a plane when he was thrown from a Wright B-2 seaplane and drowned.

October 6, 1913: Capt. Charles DeF. Chandler and Lt. T. D. Milling, who (with Lt. H. H. Arnold) had qualified as Military Aviators on 5 July 1912, were awarded their badges, the only two struck at that time.

November 30, 1913: First known aerial combat, between Phil Rader, flying for General Victoriano Huerta, and Dean Ivan Lamb, with Venustiano Carranza, over Naco, Mexico. Exact date unknown but probably in late November or early December 1913; details unknown except that a dozen or so pistol shots were exchanged.

December 31, 1913: Orville Wright demonstrated his automatic stabilizer at Dayton, Ohio. He received the Collier Trophy for 1913.

1914

January 1, 1914: America's first regularly scheduled airline started operation across Tampa Bay between St. Petersburg and Tampa, Fla., with one Benoist flying boat. It lasted 3 months.

January 20, 1914: The Navy's aviation unit from Annapolis, under Lt. J. H. Towers, arrived at Pensacola, Fla., to set up the first U.S. Naval Air Station.

May 6, 1914: The Curtiss AH-3 hydroacropplane, Lt. (jg.) P. N. L. Bellinger, pilot and Lt. (jg.) R. C. Sausley, observer, was hit by rifle fire while on a reconnaissance flight over Mexican positions near Vera Cruz—the first Navy plane to be struck by hostile fire.

July 18, 1914: Aviation Section, Signal Corps, created by Congress with Lt. Col. Samuel Reber (head of Aeronautical Division since 20 October 1913) in charge.

December 11, 1914: For the first time, radio messages were received in an Army airplane a distance of 10 miles. The experiment was conducted in the Philippines in a Burgess-Wright airplane by Lt. J. O. Mauborgne, designer of the radio set.

December 16, 1914: Two-way radiotelegraphy between the air and ground was first demonstrated by Lts. H. A. Dargue and J. O. Mauborgne, flying a Burgess-Wright plane in the Philippines.

1915

January 19-20, 1915: First German aerial bombing of Britain, by two Zeppelins, thereby opening up a new era in the exploitation of aeronautics.

March 3, 1915: The National Advisory Committee for Aeronautics was created to supervise and direct the scientific study of flight problems with a view to their practical solution.

June 22, 1915: The first aerial forest patrol took place when Wisconsin State Forester E. M. Griffith was flown by Jack Vilas to observe a forest fire.

November 6, 1915: First airplane catapult launching from a moving vessel, U.S.S. *North Carolina*, Pensacola Bay, Fla., by Lt. Comdr. Henry C. Mustin, USN.

November 18, 1915: First squadron cross-country flight begun by six Curtiss JN-3's of the 1st Aero Squadron, from Ft. Sill, Okla., to Ft. Sam Houston, Tex.—439 miles.

December 11, 1915: The first foreign officers to become flying students in a U.S. school—four Portuguese Army officers—reported to the Signal Corps.

March 16, 1916: Capt. Townsend F. Dodd, pilot, and Capt. B. D. Foulois, observer in a Curtiss plane, made the first Aviation School at San Diego.

1916

January 5, 1916: 1st Company, 2d Aero Squadron, sailed from San Francisco for the Philippines—the first aero squadron to serve outside the United States.

March 15, 1916: First U.S. tactical air unit in the field, the 1st Aero Squadron, Capt. B. D. Foulois commanding, with headquarters at Columbus, N. Mex., began operations with General Pershing's Punitive Expedition against Mexico.

American military aerial reconnaissance when they flew from Columbus, N. Mex., over Mexican territory.

April 7, 1916: Lt. H. A. Dargue and Capt. B. D. Foulois were fired on by Mexican mounted rurales at Chihuahua City, Mexico, where they had landed with dispatches from the U.S. Consul.

June 18, 1916: H. Clyde Balesley of the Lafayette Escadrille was shot down near Verdun, France—the first American aviator shot down in World War I.

July 13, 1916: The 1st Aero Company, National Guard, New York, was the first National Guard unit to be taken into Federal service.

September 2, 1916: Plane-to-plane radio was demonstrated at North Island, Calif., when radiotelegraph messages were sent and received a distance of about 2 miles between the planes of Lt. W. A. Robertson and A. D. Smith and of Lt. H. A. Dargue and Capt. C. C. Culver.

September 6, 1916: First drop of fragmentation bombs by U.S. Army; the bombs known as the Barlow Return Action, were tested at the Signal Corps Aviation Station, Mineola, N.Y.

November 18, 1916: First National Guard cross-country formation flight, Mineola, N.Y., to Princeton, N.J., and return made by seven JN-4's of the 1st Aero Company, New York National Guard.

November 20, 1916: Representative-elect O. C. Bleakley of Franklin, Pa., became the first congressman to fly to Washington, D.C., as a passenger. He flew from Philadelphia.

1917

February 13, 1917: At Pensacola, Fla., Capt. Francis T. Evans, USMC, looped and spun a seaplane for the first time. He was awarded the DFC.

February 28, 1917: For the first time in the U.S., the human voice was transmitted by radiotelephone from an airplane to the ground at San Diego.

March 13, 1917: The birth of Army Air Intelligence when an intelligence subdivision office was approved in the Aeronautical Division by Chief Signal Officer Brig. Gen. George O. Squier.

April 14, 1917: Navy's first guided-missile effort began when the Naval Consulting Board recommended that \$50,000 be used to carry on experimental work on aerial torpedoes in the form of automatically controlled airplanes or aerial machines carrying high explosives.

April 28, 1917: Air Medical Department of the Signal Corps organized under Maj. Theodore C. Lyster, Chief Surgeon.

April 30, 1917: During the month, Maj. William (Billy) Mitchell became the first American Army officer to fly over the German lines.

May 24, 1917: French Premier Ribot asked the U.S. to furnish 5,000 pilots, 50,000 mechanics, and 4,500 planes for active service by spring of 1918:

May 26, 1917: Maj. T. F. Dodd, Air Service Signal Corps, appointed aviation officer on the staff of Commander in Chief, American Expeditionary Forces, the beginning overseas organization of the Air Service, AEF.

June 2, 1917: The Aviation Section became the Airplane Division, Signal Corps. The first contingent of aviation personnel (93 skilled civilian mechanics) to go overseas in World War I sailed for England. The personnel were to study British and French airplanes and manufacturing methods and then return to the U.S.

June 5, 1917: First U.S. military air unit sent to Europe in World War I, the First Aeronautic Detachment, arrived in Pauillac, France.

June 28, 1917: Langley Field, Va., authorized as an experimental air station.

June 30, 1917: Lt. Col. William Mitchell became Aviation Officer, AEF.

July 24, 1917: First large air appropriation (\$640,000,000) authorized the Aviation Section to expand to 9,989 officers and 87,083 enlisted men.

July 27, 1917: First British DH-4 arrived in the U.S. It was the model for the first American service planes put into production with Liberty engines.

August 13, 1917: The 1st Aero Squadron sailed for Europe under command of Maj. Ralph Royce, the first squadron to report for flying duty in the AEF.

August 14, 1917: Lt. E. O. McDonnell, USN, launched a torpedo from a seaplane. The event, at Huntington Bay, Long Island, marked the beginning of serious Navy interest in launching torpedoes from aircraft.

August 22, 1917: Air-to-ground radiotelephone sets put into production.

September 3, 1917: Brig. Gen. William L. Kenly, Field Artillery, became the first Chief of Air Service, AEF, providing a single head for all activities.

October 16, 1917: Final tests of Army's airplane radiotelephone at Langley Field, Va., achieved records of 25 miles for plane-to-plane communication and 45 miles airplane-to-ground.

October 18, 1917: Aviation Medical Research Board established by Signal Corps.

November 18, 1917: Navy began aerial coastal patrols in European waters with Tellier seaplanes flying from LeCroisic at the mouth of the Loire River.

November 21, 1917: The Navy's N-9 robot-bomber (a flying bomb) was demonstrated to Army, Navy, and civilian aviation experts at Amityville, N.Y.

November 27, 1917: Brig. Gen. B. D. Foulois, Signal Corps, made Chief of Air Service, AEF.

January 20, 1918: Headquarters I Army Corps, Air Service, organized at Neufchateau, France, with Col. William Mitchell as chief.

January 21, 1918: First Marine Aeronautic Company arrived at Ponta Delgado Azores, to fly antisubmarine patrols.

February 18, 1918: 103d Aero (Pursuit) Squadron, AEF, was formed with members of Lafayette Escadrille and began operations at the front under tactical control of the French.

February 28, 1918: Under President Wilson's proclamation, licenses required for civilian pilots or airplane owners.

March 7, 1918: Office of the Director of Naval Aviation established in the Office of the Chief of Naval Operations; Aviation Section made a Division.

March 11, 1918: First DSC awarded to Army Air Service personnel went to Lt. Paul Baer, 103d Aero Squadron, for attacking a group of seven German pursuit planes, destroying one.

March 19, 1918: Ensign Stephan Potter shot down a German seaplane and officially credited as first American naval aviator to shoot down an enemy seaplane.

April 11, 1918: First U.S. patrol over enemy lines by an observation squadron in World War I made by I Corps Observation Squadron, 1st Observation Group, equipped with biplace Spads.

April 14, 1918: Lts. Douglas Campbell and Alan F. Winslow of the 94th Aero Squadron, 1st Pursuit Group, brought down the first two enemy airplanes downed by the AEF, over Toul Airdrome. Winslow got the first "kill."

April 29, 1918: Lt. Edward V. Rickenbacker, American Ace of Aces, shot down his first enemy airplane.

May 8, 1918: First three medical officers assigned as flight surgeons at U.S. military airfields. They were Captains John F. Gallagher, Robert J. Hunter, and Claude T. Uren.

May 11, 1918: First American-made DH-4, with Liberty engine, received in the AEF.

May 15, 1918: Government's first permanent airmail route, Washington to New York, inaugurated by Army pilots.

May 18, 1918: American day-bombardment began with establishment of 96th Aero Squadron at Amanty Airdrome, France.

May 20, 1918: Army aeronautics divorced from the Signal Corps and two air departments created: Bureau of Military Aeronautics and Bureau of Aircraft Production.

August 24, 1918: Maj. William R. Ream, MC, Chanute Field, Ill., was the first flight surgeon killed in an aircraft accident.

September 7, 1918: First U.S. demonstration of troop transport by air when several planes carried 18 enlisted men from Chanute Field to Champaign, Ill.

September 12, 1918: Between 12 and 15 September, the greatest air armada to date, 1,481 planes under Brig. Gen. William Mitchell, participated in the St. Mihiel offensive.

September 12, 1918: Lt. Frank Luke, 27th Aero Squadron, shot down his first balloon. When he was killed 17 days later, he had shot down 18 balloons and airplanes. For his exploits, he was posthumously awarded the Congressional Medal of honor, first aviator to receive the medal.

1918

January 19, 1918: Air Service Medical Research Laboratory activated at Hazelhurst Field, Mineola, N.Y., under Col. William H. Wilmer, Medical Corps. Facilities included a pioneer decompression chamber.

September 24, 1918: Lt. (jg.) David S. Ingalls, USN, shot down his fifth enemy plane to become the Navy's first ace.

September 25, 1918: Lt. Edward V. Rickenbacker, 94th Aero Squadron, attacked seven enemy planes near Billy, France. For this exploit, he later received the Congressional Medal of Honor.

October 3, 1918: Flight refueling was demonstrated by Lt. Godfrey L. Cabot (USNR), who lifted 155 pounds of weights into his Burgess-Dunne seaplane from a moving sea sled. In a second flight 2 years later, Cabot picked up a 5-gallon can of gasoline from a float in the Potomac River.

October 12, 1918: First night air pursuit operations by American pilots flown by members of the 185th Pursuit Squadron in France.

November 10, 1918: Last American Air Service flight over enemy lines made by 3d Pursuit Group.

November 10, 1918: Dr. Robert H. Goddard fired several rocket devices (including an intermittent-firing, long-range rocket and a projectile, bazooka-type rocket) before representatives of the Signal Corps, Air Service, Army Ordnance, and others at Aberdeen Proving Ground, Md.

1919

April 23, 1919: Under SO 95, the following were rated Military Aviators for Distinguished Service in World War I, with 75 percent flying pay: Brig. Gen. William Mitchell, Lt. Cols. Lewis H. Bereton (MA from 1913) and John W. Reynolds, Majors Melvin A. Hall and Carl Spaatz, and Capt. Reed M. Chambers.

April 28, 1919: First jump from an airplane with free back-pack type parachute (later adopted as standard) made at McCook Field, Dayton, Ohio, by civilian Leslie Irving, from a DH-9 flown by Floyd Smith, designer of the parachute.

May 16, 1919: Lt. Comdr. Albert C. Read and crew left Trepassy Bay, Newfoundland, in an NC-4, arrived at the Azores on 17 May and at Lisbon, Portugal on 27 May, thus completing the first crossing of the Atlantic by air. Two other planes which started the trip did not complete the flight.

May 19, 1919: MSgt. Ralph W. Bottriell made the first jump by Army personnel with a free backpack type parachute. This event was the first action in point of time for which the DFC was awarded.

June 1, 1919: In response to a request from the District Forester, San Francisco, the first organized and sustained aerial forest fire patrol was initiated at Rockwell Field, Calif. using Curtiss JN-4D and JN-6H planes.

June 14-15, 1919: First non-stop Atlantic crossing from St. Johns, Newfoundland, to Clifden, Ireland, 1,936 miles was accomplished by Capt. John Alcock and Lt. A. W. Brown of England in a Vickers 2 Rolls Royce 400 in 15 hours 57 minutes. They divided the \$50,000 London Daily Mail prize.

August 9, 1919: Secretary of the Navy authorized construction of the rigid airship ZR-1, the future U.S.S. *Shenandoah* and the Navy's first rigid airship.

August 14, 1919: First airmail by Aeromarine flying boat to a steamer at sea delivered to the White Star Liner Adriatic.

September 1, 1919: Dive bombing demonstrated at Aberdeen Proving Ground by Lt. Lester B. Sweely, Air Service Reserve, in a DH-4B, dropping a 300-pound demolition bomb, carried under the fuselage.

1920

May 26, 1920: GAX twin-Liberty engine armored triplane armed with eight machineguns and a 37mm. cannon, tested at McCook Field, Dayton, Ohio.

June 4, 1920: Approval of Army Reorganization Bill created an Air Service with 1,514 officers and 16,000 enlisted men. New rating of "Airplane Pilot" superseded former ratings; flying pay of 50 percent above base pay was authorized.

July 7, 1920: F-5L Navy seaplane was flown by radio compass from Hampton Roads, Va., to U.S.S. *Ohio*, 94 miles at sea.

1921

February 18, 1921: First emergency free-type parachute escape from a U.S. plane was made by C. C. Eversole, airmail pilot near Minneapolis. He jumped from a DH-4 at 800 feet. It had lost its propeller and gone into a dive and spin.

February 22-23, 1921: Jack Knight and E. M. Allison flew the first transcontinental airmail flight, San Francisco to New York, in 33 hours 20 minutes. Knight flew at night from North Platte, Nebr., to Chicago.

June 8, 1921: First flight of an Army Air Service pressurized cabin airplane.

July 13-21, 1921: In a series of Army-Navy bombing tests, airplanes sank the captured German destroyer G-102, light cruiser Frankfort, and battleship Ostfriesland, proving the vulnerability of naval craft to aerial attack.

August 10, 1921: The Navy Bureau of Aeronautics was established with Rear Adm. William A. Moffett in charge.

September 23, 1921: Day and night bombardment test flights begun; they resulted in sinking of the battleship Alabama in the Chesapeake Bay by a 2,000-pound bomb.

November 12, 1921: The first "air-to-air" refueling made when Wesley May, with a 5-gallon can of gasoline strapped to his back, transferred from the wing of a Lincoln Standard, flown by Frank Hawks, to the wing skid of a JN-4, flown by Earl S. Daugherty, climbed to the engine, and poured the gasoline into the tank.

1922

March 20, 1922: Navy's first airplane carrier, U.S.S. *Langley* (the converted collier, *Jupiter*), commissioned at Norfolk, Va.

April 25, 1922: First all-metal airplane designed for the Navy, the ST-1 twin-engine torpedo plane, made its first flight.

June 16, 1922: Night cross-country flights, Bolling Field, D.C., to Langley Field, Va., and return were initiated by Lt. Clayton Bissell.

June 16, 1922: First U.S. helicopter flight of importance made by Henry Adler Berline at College Park, Md., before representatives of the U.S. Bureau of Aeronautics.

July 1, 1922: Eight Navy medical officers, first to report for flight training, began their instruction at NAS, Pensacola.

September 4, 1922: First transcontinental crossing within a single day made by Lt. J. H. Doolittle in a rebuilt DH-4B Liberty 400, from Pablo Beach, Fla., to Rockwell Field, San Diego—2,163 miles in 21 hours 20 minutes flying time.

September 27, 1922: First "radar observations" were made by Dr. Albert Hoyt Taylor and Leo C. Young of the Naval Aircraft Radio Laboratory, Anacostia, D.C.

October 17, 1922: The first carrier takeoff in the U.S. Navy was made from the U.S.S. *Langley* by Lt. V. C. Griffin in a Vought VE-7SF.

October 26, 1922: Lt. Comdr. G. DeC. Chevalier, flying an Aeromarine, made the first landing aboard the carrier U.S.S. *Langley* while underway off Cape Henry.

1923

May 2-3, 1923: First non-stop transcontinental flight, 2,520 miles, New York to San Diego, flown by Lts. O. G. Kelly and J. A. Macready in a Fokker T2-Liberty 375—flying time 26 hours 50 minutes 3 seconds. DFC's and Mackay Trophy were awarded for the flight.

May 26, 1923: A nonstop transcontinental south-north flight, Ellington Field, Houston, Tex., to Gordon, Ontario, made by Lt. H. G. Crocker in DH-4B Liberty 400—flying time 11 hours 55 minutes.

June 27, 1923: First complete pipeline refueling between two airplanes made by Lts. Lowell H. Smith and John P. Richter at San Diego.

October 10, 1923: First American-built rigid dirigible, the first of the Zeppelin type to use helium gas, was christened the Shenandoah.

1924

April 6, 1924: (6 April to 28 September) Air Service officers made the first round-the-world air trip, the first trans-Pacific flight, and the first westbound Atlantic crossing. Leaving from and returning to Seattle, they flew 26,345 miles in 363 hours' flying time—elapsed time of 175 days.

October 28, 1924: Army airplanes broke up cloud formations at 13,000 feet over Bolling Field, D.C., by blasting with electrified sand.

1925

January 22, 1925: VF Squadron 2, the first trained to operate as a squadron from a carrier began landing practice on the U.S.S. *Langley* off San Diego.

April 13, 1925: Henry Ford started an airplane freight line between Detroit and Chicago—the first such commercial flights on a regular schedule.

December 14, 1925: The Lampert Committee, set up on 24 March 1924 by the House of Representatives to inquire into the operations of the U.S. Air Service, made its report. Among other things it favored establishment of a Department of Defense, more representation of aviation in the higher military councils, and more money for aviators.

December 17, 1925: William "Billy" Mitchell, recently demoted from brigadier general to colonel, found guilty of violating the 96th Article of War and sentenced to 5 years suspension of rank, pay, and command. He then resigned from the Army.

1926

March 16, 1926: Dr. Robert Goddard launched the world's first liquid-fueled rocket at Auburn, Mass. It traveled 184 feet in 2½ seconds at an average speed of 70 m.p.h.

April 16, 1926: Department of Agriculture purchased its first cotton-dusting plane.

May 9, 1926: First flight to the North Pole made by Richard Byrd, navigator, and Floyd Bennett, pilot, in a Fokker monoplane.

No enlisted
Aviators?

May 12, 1926: Lincoln Ellsworth, American explorer, flew across the North Pole in the dirigible Norge, commanded by Roald Amundsen.

July 2, 1926: The Air Corps Act became law; Air Service was redesignated Air Corps. It also made provisions for an Assistant Secretary of War for Air and a 5-year Air Corps expansion program.

July 2, 1926: Congress established the Distinguished Flying Cross (made retroactive to 6 April 1917).

July 10, 1926: Edward P. Warner took oath of office as first Assistant Secretary of the Navy for Aeronautics.

July 16, 1926: F. T. Davison appointed as first Assistant Secretary of War for Air.

July 28, 1926: Submarine S-1, Lt. C. B. Momsen, commanding, surfaced and launched a seaplane flown by Lt. D. C. Allen. It later recovered the aircraft and submerged, thereby carrying out the first complete cycle in a series of experimental operations of basing airplanes aboard submarines.

1927

May 21, 1927: First solo nonstop transatlantic flight—New York to Paris—completed by Charles A. Lindbergh.

May 25, 1927: Lt. J. H. Doolittle flew the first successful outside loop.

June 28–29, 1927: First nonstop Hawaiian flight from Oakland, Calif., to Wheeler Field, Honolulu, made by Lts. L. J. Maitland and A. F. Hegenberger in a Fokker C2–3 Wright 220—flew 2,407 miles in 25 hours 50 minutes. Navigation accomplished by directional beacons of San Francisco and Maui. The Mackay Trophy for 1927 and DFC were awarded for the flight.

June 29, 1927: (29 June to 1 July) Lt. Comdr. Richard E. Byrd, Lt. G. O. Noville, Bert Acosta and Bernt Balchen, in airplane America, established record four-passenger flight. Flew from Roosevelt Field, N.Y., to Ver-Sur-Mer, France, an airplane distance of 3,477 miles, in 46 hours 6 minutes.

July 17, 1927: Maj. Ross E. Rowell, USMC, led a flight of five DH's in a strafing and bombing attack against bandit forces surrounding a garrison of U.S. Marines at Ocotol, Nicaragua. This was the first pre-planned and organized dive bombing attack in combat.

September 1, 1927: Air express operations were begun by American Railway Express and major airlines.

October 12, 1927: Wright Field, Dayton, Ohio was formally dedicated.

October 28, 1927: The first air-passenger international station was established at Meacham Field, Key West; first flight was made by Pan American World Airways to Havana, Cuba.

November 13, 1927: Col. C. A. Lindbergh began goodwill flight to Mexico, Central America, and the West Indies.

1928

June 18, 1928: Amelia Earhart, first woman to cross Atlantic by air, arrived in England—airplane piloted by Wilmer Stultz.

October 19, 1928: Paratroop demonstration. A six-man machinegun team parachuted from a six-airplane formation over Brooks Field, Tex.

December 20, 1928: First airplane flight over Antarctic, 10 hours' duration, made by Sir Hubert Wilkins and Lt. Carl Ben Eielson.

1929

January 1–7, 1929: A world endurance record for refueled airplane flight set by Maj. Carl Spaatz, Capt. Ira Eaker, Lts. Elwood Quesada and Harry Halverson, and Sgt. Roy Hooe in the "Question Mark," Fokker C2–3 Wright 220, over Los Angeles Airport, 150 hours 40 minutes 14 seconds.

January 9–16, 1929: C-2 Army transport, first airplane ferried by Army Air Corps to foreign station, flew from Wright Field, Dayton, Ohio to France Field, Canal Zone, 3,130 miles, Maj. Paul Bock commanding.

January 16, 1929: Night flying became a requirement for all heavier-than-air Naval Aviators and Naval Aviation Pilots for Navy and Marine Corps.

July 17, 1929: Liquid-fueled 11-foot rocket, fired by Dr. Robert Goddard at Auburn, Mass., carried small camera and barometer. Both recovered intact after flight.

August 15, 1929: Lts. Nicholas B. Mamer and Arthur Walker, in Buhl Spokane Sun God with Wright Whirlwind engine, flew from Spokane, Wash., to east coast and back, record nonstop distance flight of 7,200 miles—refueled in air 11 times.

September 24, 1929: Lt. J. H. Doolittle made first all-blind flight at Mitchel Field, Long Island. Completely covered cockpit (accompanied by check pilot) they took off, flew short distance, landed.

November 29, 1929: Comdr. R. E. Byrd, in a trimotor Ford piloted by Bernt Balchen, made first flight over South Pole.

1930

January 16, 1930: The Lexington completed a 30-day period during which she furnished electricity to city of Tacoma, Wash., due to failure of the city's power supply.

April 12, 1930: U.S. Army Air Corps set new unofficial world record for altitude combat formation flying at Mather Field, Calif., 19 planes of 95th Pursuit Sq., commanded by Capt. H. M. Elmendorf, reached 30,000 feet.

July 22, 1930: German air-mail plane catapulted from ship-board, 250 miles en route to New York.

October 25, 1930: First transcontinental through air service between New York and Los Angeles opened by Transcontinental and Western Air, Inc.

1931

January 9, 1931: Announcement of agreement between Gen. Douglas MacArthur, Army Chief of Staff, and Adm. William V. Pratt, Chief of Naval Operations, governing operations of their respective air forces.

April 2, 1931: First contract for Navy fighter with retractable landing gear made with Gruman.

June 23, 1931: Wiley Post and Harold Gatty left New York on round-the-world flight in Winnie Mae (Lockheed P&W 550). They completed the trip 1 July—15,474 miles—8 days 15 hours 51 minutes.

September 26, 1931: Keel of the Ranger, first aircraft carrier designed and built as such, was laid at Newport News, Va.

November 3, 1931: Navy dirigible Akron carried aloft 207 persons, a new record for the largest number of individuals taken up by a single aircraft.

December 22, 1931: Maj. Gen. B. D. Foulois took oath as Chief of Air Corps.

1932

May 9, 1932: First blind solo flight (no check pilot aboard) solely on instruments, made by Capt. A. F. Hegenberger, at Dayton, Ohio, for which he was awarded the Collier Trophy.

August 25, 1932: Amelia Earhart became the first woman to complete a nonstop transcontinental flight, Los Angeles to New York.

November 19, 1932: National monument to Wilbur and Orville Wright dedicated at Kitty Hawk, N.C.

1933

January 2, 1933: Orville Wright received the first honorary fellowship in the Institute of Aeronautical Sciences.

July 15, 1933: Wiley Post began first solo round-the-world flight, 15,596 miles, 7 days 18 hours 49 minutes 30 seconds.

December 13, 1933: First Air Mail Flyer's Medal of Honor presented to Maj. Bryan Freeburg by President Franklin D. Roosevelt.

1934

February 19, 1934: Under Presidential order the Army Air Corps started flying domestic airmail.

June 1, 1934: Army Air Corps airmail operations terminated.

June 28, 1934: Contract made with Boeing Aircraft for design of B-17.

July 28, 1934: 60,613-foot altitude reached in Air Corps-National Geographic Society Balloon flight by Maj. W. E. Kepner and Capts. A. W. Stevens and O. A. Anderson; DFCs awarded.

December 31, 1934: Helen Richey, first woman airmail transport pilot on regular schedule, flew from Washington, D.C. to Detroit, Mich., in trimotored Ford 12-passenger transport.

1935

March 28, 1935: Dr. Robert Goddard launched the first rocket equipped with gyroscopic controls. It attained height of 4,800 feet; horizontal distance of 13,000 feet; and speed of 550 m.p.h.

July 30, 1935: Lt. Frank Akers, USN, made first blind landing aboard a carrier. He was awarded the DFC.

November 11, 1935: 72,394.795-foot world altitude record for balloons (141,291.3-cubic-feet or over) made by Capts. A. W. Stevens and O. A. Anderson, Rapid City, S. Dak., with National Geographic Society. Later, they were awarded society's Hubbard Gold Medal.

November 22, 1935: First transpacific airmail flight, in China Clipper, by Capt. Edwin C. Musick, from San Francisco to Honolulu, Midway Island, Wake Island, Guam and Manila.

1936

February 19, 1936: Ex-Brig. Gen. William Mitchell died in New York City. He was buried in Milwaukee, Wis.

July 3, 1936: Henry Ford bought, for Greenfield Village exhibit, the old shop in Dayton, Ohio, where the Wright brothers invented the airplane.

1937

March 1, 1937: First YB-17A, Flying Fortress, delivered to 2d Bombardment Group, Langley Field, Va.

May 6, 1937: German dirigible Hindenburg burned while mooring at Lakehurst, N.J., killing 36 persons.

May 21, 1937: Amelia Earhart and Fred Noonan left from San Francisco on west-east round-the-world flight, ending on 2 July when fliers disappeared in the Pacific.

July 1, 1937: Weather Service transferred from Signal Corps to Army Corps.

July 20, 1937: First shoulder sleeve insignia authorized for an independent American air unit—for General Headquarters Air Force.

August 23, 1937: First wholly automatic landings in history made at Wright Field by Capt. Carl J. Crane, inventor of system; Capt. George Holloman, pilot and Raymond K. Stout, project engineer. Landing made without assistance from human pilot or the ground. Crane and Holloman awarded DFCs and Mackay Trophy.

1938

July 10, 1938: Howard Hughes, pilot, and three-man crew began flight around-the-world; New York; Paris; Moscow; Omsk; Yakutsk; Fairbanks; Minneapolis and New York—14,791 miles—3 days 19 hours 8 minutes.

September 27, 1938: First airplane instructor's license issued by Civil Aeronautics Authority to Arthur J. Banks, Atlanta, Ga.

1939

May 20, 1939: First regularly scheduled transatlantic passenger and airmail service inaugurated.

1940

January 23, 1940: First American test of practicability of moving complete troop units by air, a battalion of 65th Coast Artillery transported 500 miles by 38 bombers of the 7th Bombardment Group, Hamilton Field, Calif.

February 26, 1940: War Department created U.S. Air Defense Command to integrate defenses against air attack. The command at Mitchel Field, N.Y., was under Brig. Gen. James E. Chaney.

March 26, 1940: U.S. commercial airlines completed a year of flying, no fatal accident or serious injury to passengers or crew members.

May 16, 1940: President Roosevelt called for 50,000 planes a year.

June 15, 1940: Congress authorized Navy 10,000 airplanes and 48 airships.

September 2, 1940: U.S. transferred to Great Britain 50 destroyers in exchange for air and naval bases at 8 strategic points in Atlantic and Caribbean.

1941

May 13-14, 1941: First mass flight of bombers over the Pacific, 21 B-17s flew from Hamilton Field, Calif., to Hickam Field, Hawaii, 13 hours 10 minutes.

June 20, 1941: Establishment of Army Air Forces, comprising Office of the Chief of Air Corps and the Air Force Combat Command with Maj. Gen. H. H. Arnold as Chief.

August 12, 1941: First successful rocket-assisted takeoff of airplane.

September 17, 1941: Parachute troops used for first time in American tactical exercise. Paratroopers dropped during Louisiana maneuvers.

December 1, 1941: Executive Order established Civil Air Patrol.

December 7, 1941: Japanese bombed Pearl Harbor.

December 10, 1941: Aircraft from Enterprise sank Japanese submarine north of Hawaiian Islands; first Japanese combat ship sunk by U.S. forces in World War II.

December 18, 1941: Lt. "Buzz" Wagner, USAAF, first American ace of World War II by shooting down his fifth Japanese plane over the Philippines.

1942

January 28, 1942: Hq. and Hq. Squadron of 8th Air Force activated at Savannah AAB, Ga., with Col. Asa Duncan as commanding officer. (Three years later the 8th observed its third birthday with 1,000-plane raid on the Reich. In 3 years it flew more than 250,000 bomber and 210,000 fighter sorties, dropped 518,000 tons of bombs, and destroyed 13,000 planes.)

February 22, 1942: First American air headquarters in Europe in World War II, U.S. Army Bomber Command, established in England, Brig. Gen. I. C. Eaker, commanding.

March 1, 1942: Ensign William Tepuni, flying Lockheed Hudson, sank first German submarine by U.S. forces in World War II.

March 9, 1942: Reorganization of War Department into three autonomous forces; Army Air Forces; Ground Forces; and Services of Supply.

April 18, 1942: Doolittle Raid on Tokyo by 16 B-25s with takeoff from the Hornet, Lt. Col. James H. Doolittle, commanding.

May 4-8, 1942: Battle of Coral Sea. First naval engagement fought by aircraft; opposing ships made no contact.

June 3-6, 1942: Battle of Midway. Severe defeat administered to Japanese ending their offensive to East, marking major turning point of war.

July 4, 1942: First AAF bomber mission over Western Europe in World War II flown over four airdromes in Holland by six crews of 15th Bombardment Squadron (S) in American-built RAF Bostons.

July 7, 1942: A B-18 of 396th Bombardment Squadron sank a German submarine off Cherry Point, N.C., in first sure "kill" off Atlantic coast by aircraft.

August 17, 1942: First American heavy bomber mission in Western Europe in World War II flown by B-17s of 97th bombardment Group against Rouen-Scotteville yards, France.

September 1, 1942: First airborne engineering unit, 871st Airborne Engineers, activated at Westover Field, Mass.

September 29, 1942: Eagle squadrons, American flyers which served with RAF, formally taken over by VIII Fighter Command, organized into 4th Fighter Group.

October 2, 1942: First flight by turbojet aircraft, Bell XP-59A, in U.S. made at Muroc, Calif.

November 8-11, 1942: Army carrier-based planes supported invasion of North Africa.

1943

January 27, 1943: First American bombing of Germany took place, B-17s of 1st Bombardment Wing, 8th Air Force, attacked Wilhelmshaven and Emden.

February 18, 1943: First class of 39 flight nurses graduated from AAF School of Air Evacuation, Bowman Field, Ky.

March 4, 1943: End of Bismarck Sea action; major Japanese effort to reinforce Lae was turned back by aircraft of the Southwest Pacific Air Forces. 40,000 tons of Japanese shipping sunk, and 50 to 60 enemy planes destroyed.

April 5, 1943: Operation FLAX, concentrated attack on Axis air transport service between Italy and Tunisia via airdromes in Sicily, begun by planes of Northwest African Air Forces and resulted in claims of 201 enemy planes destroyed.

June 11, 1943: Several weeks of Allied bombings caused the Italian garrison on island of Pantelleria to surrender; first large defended area to be conquered by airpower.

June 25, 1943: Heaviest single attack made to date by Northwest African Air Force—130 B-17s dropped 300 tons or more of bombs on Messina, Sicily.

July 2, 1943: Lt. Charles Hall the first U.S. Negro flier to shoot down an Axis plane, a German Focke-Wulf 190, over Sicily.

July 10, 1943: Allied airborne troops landed at Gela and Syracuse, Sicily, in first large-scale airborne operation attempted by Allies in World War II.

August 1, 1943: Mediterranean-based B-24s made low-level attack on Ploesti oil refineries in Rumania in first large-scale, minimum-altitude attack by AAF heavy bombers upon a strongly defended target; it was the longest major bombing mission to date in terms of distance from base to target.

August 13, 1943: Secretary of the Navy established the Office of the Deputy Chief of Naval Operations (Air); Vice Adm. J. S. McCain was first DCNO (Air).

September 13, 1943: Over 1,200 paratroopers of 82d Airborne Division dropped on Salerno, Italy, beachhead by the 52d Troop Carrier Wing without loss of a man or a plane.

December 17, 1943: Orville Wright presented 1943 Collier Trophy to his former pupil, Gen. H. H. Arnold, Commanding General, Army Air Forces, for outstanding achievement in aviation.

December 24, 1943: First major 8th Air Force assault on German V-weapon sites made when 670 B-17s and B-24s bombed Pas de Calais area.

December 26, 1943: Preinvasion bombing of Cape Gloucester (New Britain) completely destroyed enemy defenses; 5th Air Force adopted term "Gloucesterizing" to describe complete target destruction.

1944

January 1, 1944: United States Strategic Air Forces in Europe (USSTAF) activated.

January 22, 1944: 1,200 sorties by Mediterranean Allied Air Force planes supported ground forces as they hit Anzio beaches.

January 29, 1944: In largest U.S. air operation to date, 800 heavy bombers of 8th Air Force dropped 1,886 tons of bombs on Frankfurt, Germany.

February 3, 1944: About 1,200 B-17s, B-24s and escort fighters attacked Wilhelmshaven and Emden, Germany.

February 15, 1944: Medium and heavy bombers made 254-plane attack on Abbey of Monte Cassino, Italy, ahead of 5th Army.

February 17, 1944: First night bombing attack in history of U.S. carrier aviation carried out from Enterprise by 12 radar-equipped TBF-1Cs on Truk.

February 20, 1944: First mission of "Big Week"—6 days of strikes by 8th (England) and 15th (Italy) Air Forces against German aircraft plants.

March 6, 1944: In the first major USAAF attack on Berlin, 660 heavy bombers unloaded 1,600 tons of bombs.

March 25, 1944: First operational use of VB-1 Azon vertical bomb, by 15th Air Force against Avisio Viaduct, successfully closing the Brenner Pass.

March 26, 1944: Marine Corsairs from Engebi flew first fighter escort for AAF B-25s on 360-mile bombing mission against Ponape.

March 28, 1944: 15th Air Force flew its first thousand-ton raid, striking communications targets in Italy, in support of Operation Strangle, designed to cut off logistical support to German troops in central Italy.

March 30, 1944: Navy Task Force 58, under Vice Adm. Marc Mitscher, with 11 carriers, began series of attacks on Palm, Yap, Ulithi, and Woleai as prelude to landings at Hollandia.

May 10, 1944: Chengtu Project (construction in China of five bomber and six fighter fields) completed. Begun in January, the task was accomplished by 400,000 coolies using primitive methods.

May 11, 1944: End of Operation Strangle (19 March to 11 May). Mediterranean Allied Air Forces' operations against enemy lines of communication in Italy totaled 50,000 sorties, dropping 26,000 tons of bombs.

May 31, 1944: First launch of experimental VB-7 vertical bomb, using television.

June 2, 1944: First shuttle bombing mission using Russia as eastern terminus. Lt. Gen. Ira C. Eaker, head of Mediterranean Allied Air Forces, flew in one B-17.

June 6, 1944: D-day effort of U.S. air forces was unprecedented in concentration and size—Allied aircraft flew approximately 15,000 sorties.

June 13, 1944: First German V-1s fired in combat, launched from France against England—4 of 11 struck London.

June 15, 1944: First B-29 strike made against Japan; 47 B-29s of XX Bomber Command, from bases in Chengtu, China struck Yawata.

July 22, 1944: First all-fighter shuttle raid made by Italy-based U.S. Lightnings (76) and Mustangs (58) of 15th Air Force which attacked Nazi airfields at Bazau and Zilistea, northeast of Ploesti, Rumania. Planes landed at Russian bases.

July 25, 1944: Over 2,400 bombers attacked German positions in front of the American lines at St. Lo over a 3-hour period.

August 4, 1944: First Aphrodite mission (radio controlled aircraft carrying 20,000 pounds of TNT) flown against rocket sites in Pas de Calais area.

August 7, 1944: Carrier Division 11 commissioned. Composed of carriers *Saratoga* and *Ranger*, it was the first U.S. division specifically commissioned for night operations.

August 15, 1944: In the greatest 1-day effort in Mediterranean to date, Mediterranean Allied Air Forces flew 4,249 sorties including landing 9,000 airborne troops in Southern France.

September 14, 1944: Successful flight into hurricane for scientific data made by Col. Floyd B. Wood, Maj. Harry Wexler, and Lt. Frank Reckord in Douglas A-20.

September 17, 1944: Operation Market began. 1,546 Allied aircraft and 478 gliders carried parachute and glider troops in airborne assault between Eindhoven and Arnhem in Holland, to secure Rhine crossing at Arnhem.

October 23-26, 1944: Battle of Leyte Gulf; featured carrier air as well as surface action, and introduced Kamikaze attacks.

November 10, 1944: Thirty-six B-25s of 5th Air Force attacked Japanese convoy near Ormoc Bay, Leyte, sinking three ships.

November 16, 1944: In largest air-ground cooperative effort to date, over 4,000 Allied planes dropped more than 10,000 tons of bombs in front of 1st and 9th Armies.

November 17, 1944: Land-based American fighters appeared over Manila, Bataan, and Corregidor for the first time since early 1942.

November 24, 1944: First very heavy bomb strike on Tokyo, and first mission of XXI Bomber Command against Japanese home islands, flown by 88 B-29s from the Marianas.

December 17, 1944: Maj. Richard Bong shot down his 40th enemy plane in the Pacific.

December 21, 1944: Gen. H. H. Arnold became General of the Army, first airman to hold this rank.

1945

January 22, 1945: Navy task forces completed 3 weeks of action against Luzon, Formosa, the Ryukyus, Pescadores, Okinawa, and Hong Kong with an aerial score of over 600 enemy aircraft destroyed and 325,000 tons of enemy shipping sunk.

January 28, 1945: Clark Field, Philippines, retaken by American forces.

February 3, 1945: Largest raid, to date, against Berlin by American bombers—959 B-17s.

February 16, 1945: Troop carrier C-47s dropped 2,065 paratroopers on Corregidor after long and heavy air bombardment of enemy guns and positions.

February 16, 1945: The Navy, in next 30 days, destroyed 648 enemy aircraft in attacks on Iwo Jima, Okinawa, the Ryukyus, and Tokyo.

February 20, 1945: Secretary of War approved plans to establish the White Sands Proving Ground, a rocket-firing installation.

March 9, 1945: In change of tactics to double bombload, 20th Air Force sent more than 300 B-29s from the Marianas against Tokyo in low-altitude, incendiary, night raid, destroying about one-fourth of the city.

March 11, 1945: Greatest weight of bombs dropped in a USAAF strategic raid on a single target in Europe fell on Essen—1,079 bombers released 4,738 tons.

March 14, 1945: Italy-based American bombers cooperated directly with Red Army in attacks on tactical targets, selected by Russians, in Austria, Hungary, and Yugoslavia.

March 17, 1945: 307 B-29s dropped 2,300 tons of incendiaries on Kobe, Japan.

March 18, 1945: 1,250 U.S. bombers, escorted by 670 fighters, gave Berlin its heaviest daylight attack—3,000 tons of bombs on transportation and industrial areas.

March 24, 1945: 15th Air Force, flying from southern Italy, bombed Berlin for first time—approximately 150 B-17s dropped 357 tons of bombs on industrial targets.

April 4, 1945: YR-4 helicopter of 10th Air Force air-jungle rescue detachment landed in enemy territory in Burma and evacuated survivor of a PT-19 crash.

April 7, 1945: First fighter-escorted missions by B-29s against Japan.

April 10, 1945: About 50 German jet aircraft shot down 10 American bombers in the Berlin area, largest loss of the war to jets in a single mission.

April 23, 1945: PB-4Ys of Patrol Bombing Squadron 109 launched two Bat missiles against enemy shipping in Balikpapan Harbor, Borneo, in first combat use of only automatic homing missile in World War II.

May 16, 1945: Fighter-bombers began assault on Ipo Dam area (Luzon) in largest mass napalm employment in Pacific war.

July 14, 1945: A-20s from Hollandia set fire to Japanese oil fields at Boela, Ceram, in first use of rocket bombs in southwest Pacific.

August 6, 1945: Atomic bomb dropped on Hiroshima from B-29 Enola Gay, under command of Col. Paul W. Tibbets, Jr.

August 9, 1945: Second atomic bomb dropped on Nagasaki from B-29 Bock's Car, commanded by Maj. Charles W. Sweeney.

August 27, 1945: B-29s made their first supply drop operation to Allied POWs in the Weihsien camp near Peiping, China.

September 26, 1945: The Navy, at Naval Air Station, Anacostia, D.C., demonstrated Ryan Fireball RF-1, first partially jet-powered plane designed for carriers.

September 26, 1945: In a series of firing tests at White Sands Proving Ground, N. Mex., between 26 September and 25 October, a WAC Corporal attained a height of 43.5 miles.

October 24, 1945: American Airlines plane arrived at Hurn Airfield, England, from New York in 14 hours 5 minutes' flying time, to complete first land plane commercial flight from North America to Europe.

November 6, 1945: First jet-propelled landing on an aircraft carrier made by Ensign Jake C. West in an FR-1, turbojet and conventional reciprocating engine fighter, using jet power to land on carrier Wake Island.

November 7, 1945: Bell Aircraft Corp. announced successful test flights of jet-propelled P-59 by remote control; television was used to read instruments.

November 19–20, 1945: World nonstop, nonrefueled distance record of 7,916 miles set by B-29 Dreamboat, piloted by Col. Clarence S. Irvine—Guam to Washington, D.C., in 35 hours 5 minutes.

December 3, 1945: 412th Fighter Group, first USAAF jet fighter unit, received first P-80 aircraft at March Field, Calif.

December 17, 1945: President Truman presented 1945 Collier Trophy to Gen. Carl Spaatz for "demonstrating the airpower concept" in the European war.

1946

January 26, 1946: The Army announced creation by AAF of the First Experimental Guided Missile Group to develop and test this type weapon. Group was activated at Eglin Field, Fla.

January 30, 1946: Maj. Gen. Curtis E. LeMay announced that a more advanced aeronautical engineering school would be established at Wright Field, Ohio. He urged building a \$300,000 wind tunnel for testing supersonic aircraft.

February 3, 1946: AAF disclosed in Columbus, Ohio, the development of a plane with automatic devices to preset takeoff, flight, and landing—pilot to only monitor the equipment.

March 1, 1946: Gen. Carl Spaatz designated Commanding General, Army Air Forces, succeeding Gen. H. H. Arnold.

March 8, 1946: CAA granted first commercial helicopter license; license NC-1H issued for Bell Model 47 two-place helicopter.

March 12, 1946: Army Air Force School redesignated as Air University with headquarters at Maxwell Field, Ala.

March 21, 1946: Strategic Air Command, Tactical Air Command, and Air Defense Command activated.

March 22, 1946: First American-built rocket, constructed by Douglas to escape earth's atmosphere, reached 50-mile height.

April 1, 1946: Bell Aircraft Corp., contracted with AAF (under Project MX-776) to produce a 100-mile guided missile (later designated the Rascal).

April 16, 1946: A V-2 rocket, first fired in the U.S., launched by U.S. Army at White Sands Proving Ground, N. Mex.

April 22, 1946: Glenn L. Martin Co. contracted with AAF to produce under Project MX-771 a surface-to-surface guided missile (later called the Matador).

June 22, 1946: First jet-powered airmail delivery made by two Army P-80s, one from Schenectady, N.Y., to Washington, D.C., the other from Schenectady to Chicago.

June 26, 1946: Aeronautical Board agreed that knot and nautical mile be adopted by AAF and Navy as standard aeronautical units of speed and distance.

June 28, 1946: First V-2 rocket, fully instrumented for upper-air research, launched from White Sands Proving Ground, N. Mex. It rose to 67 miles.

July 1, 1946: B-29, Dave's Dream, dropped a Nagasaki-type atom bomb from 30,000 feet on 73 vessels off Bikini Atoll in Operation Cross-roads. Results showed five ships sunk, nine heavily damaged.

July 21, 1946: McDonnell XFH-1 Phantom became the first U.S. jet to operate from a carrier (U.S.S. *Franklin D. Roosevelt*).

August 2, 1946: National Air Museum established under the Smithsonian Institution.

August 8, 1946: XB-36 made its first flight at Ft. Worth, Tex. (First production model flew on 16 August 1947).

August 17, 1946: Sgt. Lawrence Lambert of Wright Field, Ohio, became the first person in the U.S. to be ejected from an airplane by means of an ejection seat. He was ejected from a P-61 traveling 302 m.p.h. at 7,800 feet.

November 13, 1946: First artificial snow from natural cloud produced by Vincent Joseph Schaefer of General Electric Corp. Experiment carried out by dropping dry-ice pellets from plane over Greylock Mountain, Mass.

November 15–28, 1946: Tactical Air Command used P-80s as first jets in close support of ground forces, in California exercises.

December 17, 1946: A space biological research program initiated at Holloman AFB, N. Mex., by National Institute of Health.

December 22, 1946: NACA announced development of the Tiamat, a winged rocket missile with speed in excess of 600 m.p.h. Flown at Langley Field, Va., it was the first guided missile flown successfully through predetermined program of maneuvers.

1947

February 12, 1947: Loon—launched from the U.S.S. *Cusk*—first firing of guided missile from a submarine.

September 26, 1947: Transfer of personnel, bases, and materiel from the Army to the new Department of the Air Force was ordered by Defense Secretary James W. Forrestal.

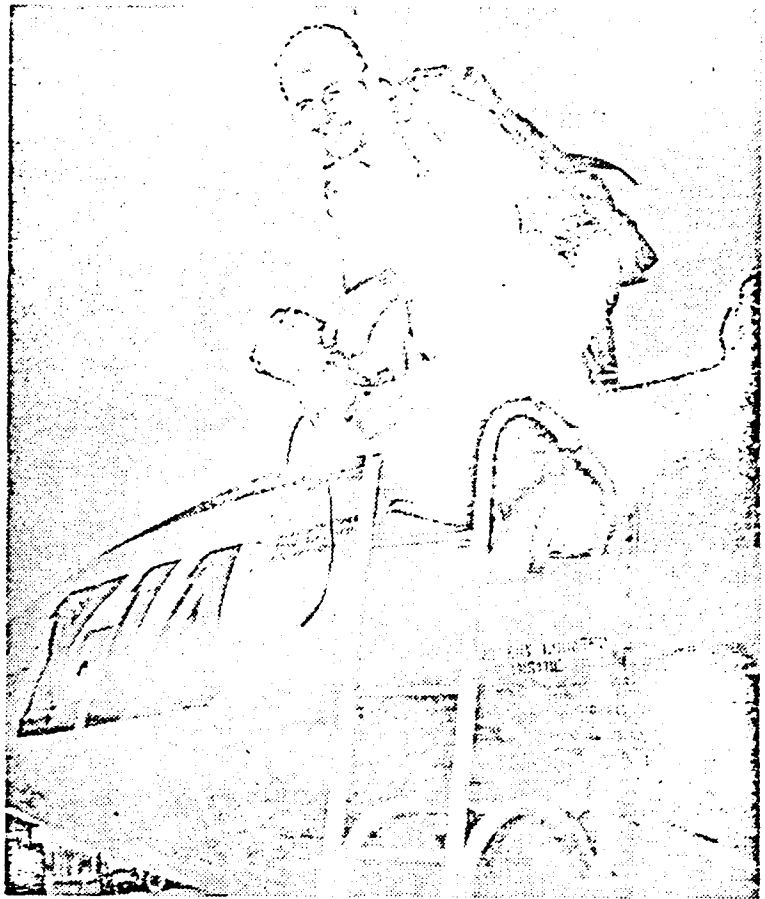
September 26, 1947: Maj. Gen. William E. Kepner was named chief of the new atomic energy division of the USAF.

October 14, 1947: The first faster-than-sound-flight was made by Capt. Charles E. Yeager at Muroc, Calif., in a rocket-powered Air Force research plane, Bell XS-1.

November 24, 1947: First live Aerobee rocket fired to height of 190,000 feet from White Sands Proving Ground, N. Mex.

December 10, 1947: Edwards AFB, Calif.—Lt. Col. John P. Stapp, USAF (MC)—made first rocket-propelled sled ride.

December 17, 1947: Prototype B-47 jet bomber flew for first time at Seattle.



1948

January 12, 1948: Northrop Aircraft Co. announced that rocket-powered test vehicles at Muroc AB, Calif., attained speed of 1,019 m.p.h.

January 15, 1948: Gen. H. S. Vandenberg, Vice Chief of Staff, USAF, approved a policy calling for development of satellite components and initiation of satellite development at proper time.

January 30, 1948: Orville Wright died in Dayton, Ohio, age of 76.

March 1, 1948: Congressional Aviation Policy Board recommended Air Force be built to 70 groups.

April 30, 1948: Gen. Hoyt S. Vandenberg designated to succeed Gen. C. Spaatz as Air Force Chief of Staff.

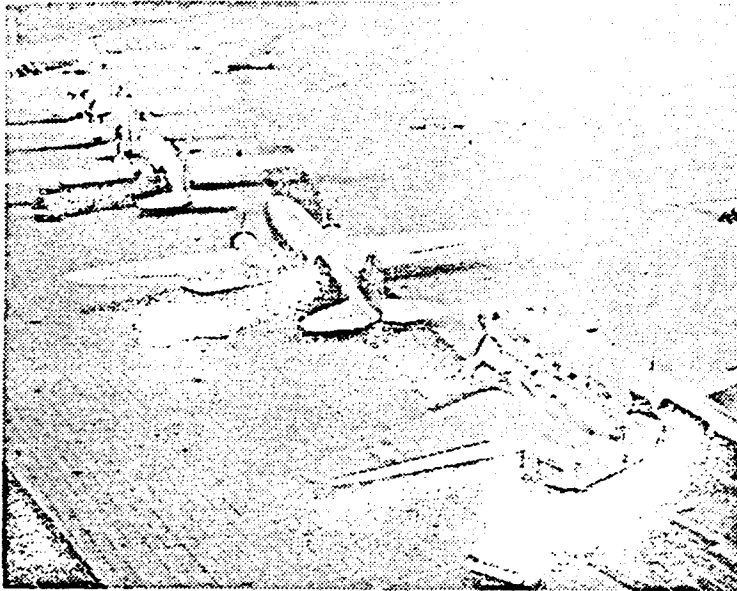
May 2, 1948: Navy announced successful testing of submarine capable of firing guided missiles.

May 5, 1948: Fighter Squadron 17-A, equipped with 16 FH-1 Phantoms, became first carrier-qualified jet squadron in U.S. Navy.

June 1, 1948: Navy and Air Force air transport systems consolidated into Military Air Transport Service under USAF.

June 10, 1948: Air Force confirmed repeated attainment of supersonic speeds by X-1 (formerly XS-1) flown by Capt. C. E. Yeager.

June 26, 1948: Berlin Airlift (Operation Vittles) initiated as a response to ground blockade imposed by Russia on Berlin.



July 17, 1948: B-29s arrived in England for training at British bases. First U.S. bombers based in the United Kingdom after World War II.

July 20, 1948: First west-east transatlantic flight of jet planes, 16 F-80s reached Scotland, from Selfridge Field, Mich. 9 hours 20 minutes.

July 23, 1948: MATS ordered to establish Airlift Task Force with headquarters in Germany for relief of Berlin. Maj. Gen. W. H. Tunner named to command Task Force operations.

August 6, 1948: First B-29s to circumnavigate the globe landed near Tucson, Ariz., after leisurely 15-day trip.

September 15, 1948: World speed record of 670.981 m.p.h. over a three kilometer course was set by Maj. Richard L. Johnson, in F-86A at Muroc, Calif.

September 28, 1948: NACA announced that a ramjet missile had exceeded 1,600 m.p.h.

October 19, 1948: Navy announced that photographs of earth's surface had been taken from altitudes between 60 and 70 miles by cameras installed in rockets.

October 31, 1948: Air Force revealed the use of ramjet engines for first time on piloted aircraft, a modified F-80.

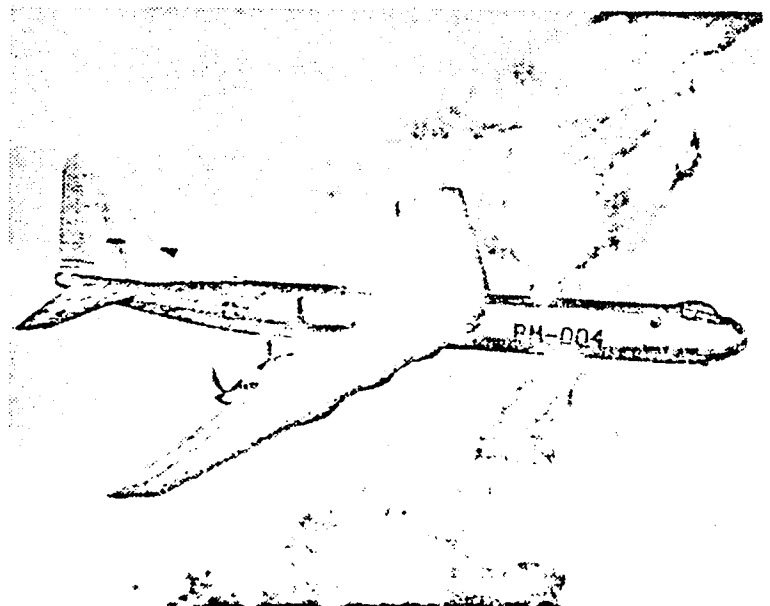
November 10, 1948: First symposium on Space Medicine held at School of Aviation Medicine.

November 30, 1948: Curtiss-Wright demonstrated its new reversible pitch propellers; it enabled a C-54 to make controlled descent from 15,000 to 1,000 feet—1 minute 22 seconds.

December 1, 1948: Continental Air Command was activated.

December 8, 1948: A 6-engine B-36 completed 9,400-mile nonstop flight from Ft. Worth—Hawaii—Ft. Worth without refueling.

December 17, 1948: Celebration of the Kitty Hawk's return to the U.S. was held at the Smithsonian Institution on the 45th anniversary of flight. The plane arrived in Washington on 22 November, from the British museum where it was viewed for 20 years.



December 29, 1948: Defense Secretary Forrestal said that U.S. is working on "earth satellite vehicle program," a project to study operation of guided rockets beyond earth's pull of gravity.

1949

January 3, 1949: Bill to speed guided missile research introduced in House by Representative Carl Vinson of Ga.

January 25, 1949: USAF adopted blue uniforms.

January 26, 1949: U.S.S. *Norton Sound*, Nation's first guided missile experimental test ship, launched its first missile—Loon.

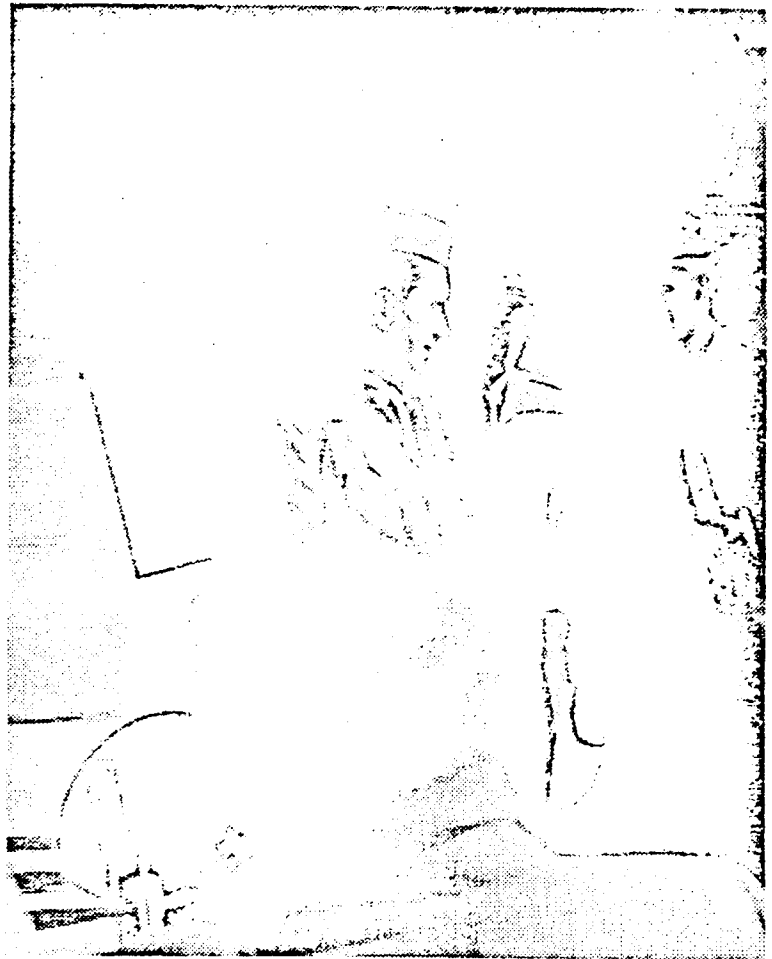
February 4, 1949: General authorization given by CAA for commercial planes to use ground-controlled approach radar as "primary aid" for landing in bad weather.

February 8, 1949: Boeing XB-47 Stratojet set unofficial coast-to-coast speed record—3 hours 46 minutes—flying 2,289 miles—at average speed 607.2 m.p.h., Moses Lake, Wash., to Andrews AFB, Md.

February 9, 1949: The Department of Space Medicine established at School of Aviation Medicine, Randolph AFB, Tex., Dr. Hubertus Strughold as first Chief.

March 2, 1949: Carswell AFB, Tex., USAF Boeing B-50 Lucky Lady II, Capt. James Gallagher as pilot, completed first nonstop, round-the-world flight in history, covered 23,452 miles, 94 hours 1 minute, being refueled in air over Azores, Arabia; the Philippines; and Hawaii.

March 26, 1949: First 10-engine plane (6 reciprocating and 4 jet), the B-36, span of 230 feet, length of 162 feet, made first successful test-flight at Ft. Worth, Tex.



March 30, 1949: President signed a bill providing for construction of "permanent" radar defense network for U.S.

April 6, 1949: Curtiss-Wright announced the X-1 rocket plane (made by Bell, engine by Curtiss-Wright) flew an unofficial world-record speed, 1,100 m.p.h., for piloted planes.

May 11, 1949: President Truman signed a bill providing 3,000-mile guided missile test range for USAF. The range subsequently established at Cape Canaveral, Fla.

May 12, 1949: Russian blockade of West Berlin ended. To build up stockpiles, airlift continued on gradually reduced basis.

June 2, 1949: Gen. H. H. Arnold given permanent rank of General of the Air Force.

August 9, 1949: First use in U.S. of a pilot-ejection seat for emergency escape made by Navy Lt. J. L. Fruin from F2H-1-Banshee, flying over 500 knots near Walterboro, S.C.

August 10, 1949: President Truman signed National Security Act amendments of 1949, revising unification legislation of 1947 and converting National Military Establishment into the Department of Defense.

September 30, 1949: Berlin Airlift, gradually reduced since 12 May 1949, officially ended. Results show 2,343,301.5 tons of supplies carried on 277,264 flights, U.S. planes carried 1,783,826 tons.

October 4, 1949: Entire field artillery battery dropped from C-82 by parachute, Ft. Bragg, N.C.

December 5, 1949: USAF diverted \$50 million from other projects to begin construction of radar screen in Alaska and other U.S. areas, as result of detection of a Soviet atomic explosion in August 1949.

1950

January 13, 1950: A Navy Lark, surface-to-air guided missile, made first successful automatic homing flight.

January 15, 1950: General of the Air Force, H. H. Arnold, died of heart ailment at Sonoma, Calif.

January 23, 1950: USAF established Air Research and Development Command.

February 1, 1950: Continental Air Command directed to establish Civil Air Raid Warning System.

February 6, 1950: Defense Department announced test-firing of Navy's Mighty Mouse, the "first" successful air-to-air rocket.

February 20, 1950: Beginning of Operation Portrex, largest peacetime maneuver in U.S. history; first to employ airborne troops in an amphibious operation.

March 15, 1950: JCS, in a basic decision on guided missile roles and missions, gave the USAF formal and exclusive responsibility for strategic guided missiles.

April 16, 1950: USAF given full responsibility for developing and operating the Joint Long Range Proving Ground. Name changed to Long Range Proving Ground Division, and the Division given the status of a major air command.

June 1, 1950: USAF authorized to organize the Ground Observer Corps.

June 27, 1950: President Truman announced he had ordered the USAF to aid South Korea, which had been invaded by North Korean Communist forces.

June 27, 1950: First enemy plane shot down in Korean War, a Yak, destroyed by 1st Lt. William G. Hudson, USAF, flying an F-82.

June 30, 1950: President Truman authorized General MacArthur to dispatch air forces against targets in North Korea.

July 1, 1950: Carrier aircraft went into action in Korea, strikes in and around Pyongyang. Also first Navy kills in air combat as Lt. (jg.) L. H. Plog and Ensign E. W. Brown each downed a Yak-9.

July 6, 1950: James H. Doolittle named aviator of the decade by Harmon International Aviation Awards Committee; Jacqueline Cochran named outstanding aviatrix; Vice Adm. Charles E. Rosendahl cited as top aeronaut (lighter-than-air man).

August 1, 1950: The Collins Vandenberg Agreement established leases for the cooperation of Air Defense Command and Army Antiaircraft Command in air defense for U.S.

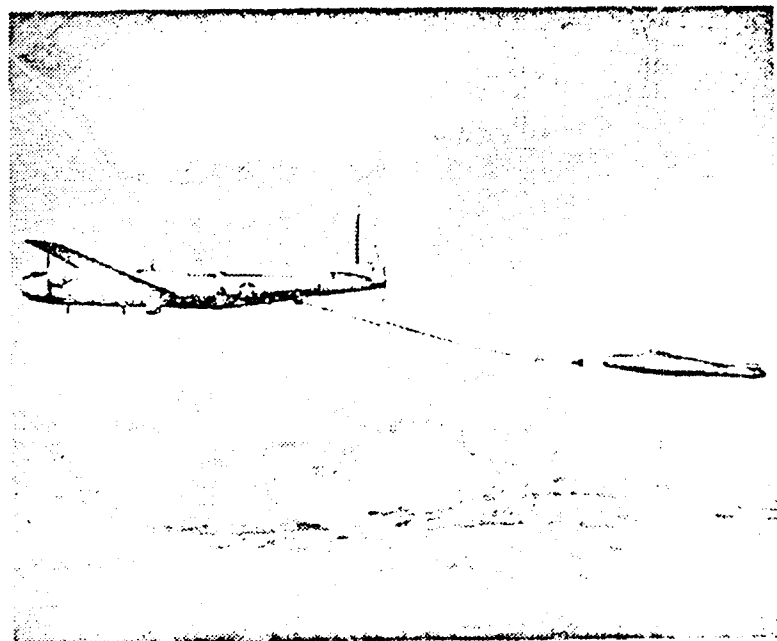
August 3, 1950: Marine fighters began operations in Korea.

September 15, 1950: Air-Ground Operations School opened at Pope AFB, N.C.

September 22, 1950: First nonstop flight of Atlantic by jet aircraft completed when Col. David C. Schilling landed at Limestone, Maine, flying 3,300 miles from England, 10 hours 1 minute.

September 28, 1950: In a balloon launched at Holloman AFB, N. Mex., 8 white mice survived a flight to altitude of 97,000 feet.

September 29, 1950: USAF announced that a parachute jump of 42,449 feet was made by Capt. Richard V. Wheeler at Holloman AFB, N. Mex.



October 10, 1950: Lt. Gen. Lauris Norstad appointed commander of United States Air Forces in Europe.

November 8, 1950: First jet plane aerial combat in history, a USAF F-80 and MIG-15, took place in Korea. Lt. Russell J. Brown shot down the MIG.

November 9, 1950: The first encounter of Navy jets with MIGs, Lt. Comdr. W. T. Amen became the first Navy pilot in history to shoot down a jet aircraft.

1951

January 8, 1951: Lt. Gen. Ennis C. Whitehead appointed Commanding General of the reestablished Air Defense Command.

March 6, 1951: Talos missile launched by Naval Ordnance Test Station, and operated for 2 minutes in longest full-scale ramjet flight yet achieved.

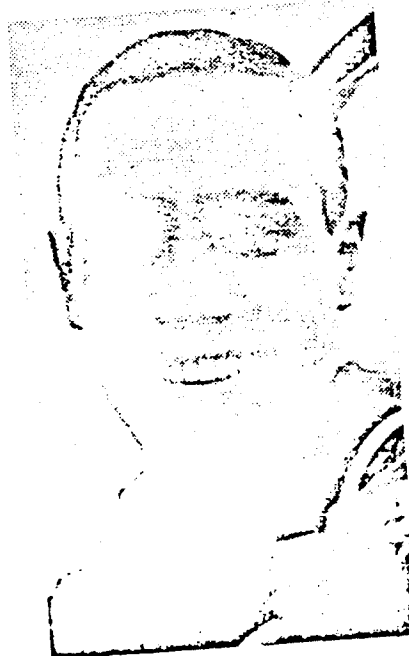
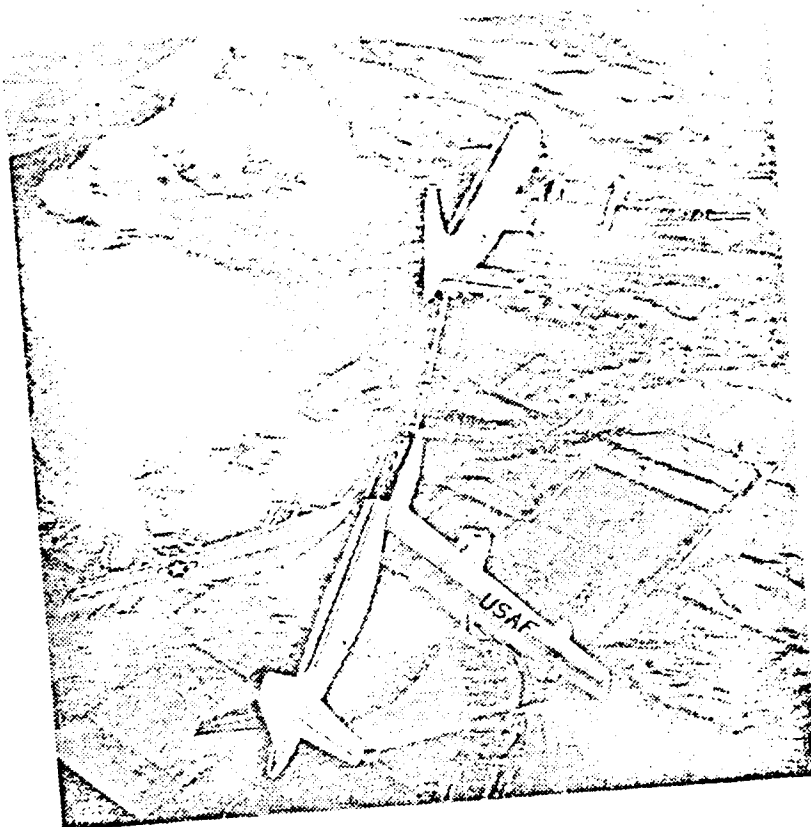
March 15, 1951: Using Boeing KC-97A Stratofreighter tanker, Boeing Airplane Co. successfully refueled B-47 jet bomber in-flight.

April 2, 1951: Lt. Gen. L. Norstad assumed command of Allied Air Forces Central Europe under SHAPE.

April 2, 1951: USAF announced establishment of Air Research and Development Command as a major command, Maj. Gen. David M. Schlatter, commander.

April 18, 1951: First Aerobee research rocket (with monkey) flown in space biology experiment launched at Holloman AFB, N. Mex.

May 20, 1951: Capt. James Jabara became the world's first jet ace; shooting down his fifth and sixth MIGs in the Korean War.



August 1, 1951: In exchange of diplomatic notes, Canada and U.S. ratified an agreement providing for cooperation between the two in the erection and operation of a radar defense network on Canadian territory.

August 15, 1951: At Muroc, Calif., Bill Bridgeman flew Navy D-558-2 Douglas Skyrocket to highest altitude ever reached by a human being, 79,494 feet.

August 24, 1951: Posthumous Congressional Medal of Honor award to Maj. Louis J. Seville, USAF, who was killed 5 August 1951 near Hamchang, Korea; Seville attacked Red troops in his damaged plane until it crashed. First Air Force Congressional Medal of Honor winner in Korean War.

August 24, 1951: Air Force Chief of Staff Gen. Hoyt S. Vandenberg reported that the February 1951 Nevada atomic bomb tests had disclosed the development of a new atomic tactical weapon for use against armies in the field.

September 5, 1951: USAF announced it had awarded a contract to Consolidated Vultee to build world's first atomic-powered plane, engine to be built by General Electric.

September 13, 1951: USAF announced establishment of its first pilotless bomber squadron at Missile Test Center, Cocoa, Fla.

September 20, 1951: Air Force made first successful recovery of animals from rocket flight when a monkey and 11 mice survived an Aerobee flight to altitude of 236,000 feet.

October 3, 1951: Helicopter Antisubmarine Squadron HS-1, first in Navy history, commissioned at Key West.

November 29, 1951: Announcement of USAF's first all-jet heavy bomber, the eight-jet XB-52.

May 3, 1952: A ski-and-wheel equipped USAF C-47 made world's first successful North Pole landing.

May 22, 1952: Two monkeys and two mice, placed in an Air Force Aerobee rocket, ascended to height of about 38 miles, were returned to earth unharmed, without apparent ill-effect.

June 23-24, 1952: Combined air elements of the Air Force, Navy and Marines virtually destroyed the electric power potential of North Korea. The 2-day attack, involving over 1,200 sorties, the largest single air effort since World War II.

July 2, 1952: Air Force disclosed a new jet fighter, the Lockheed F-94C *Starfire*, first Air Force fighter armed solely with rockets.

July 14, 1952: Ground Observer Corps initiated 24-hour a day Skywatch program as part of a nationwide air defense effort.

July 17, 1952: A record trans-oceanic mass jet flight completed by 58 F-84 Thunderjets of 31st Fighter Escort Wing. The flight, under Col. David C. Schilling, left Turner AFB, Ga., on 4 July landing at Yokota AB, Japan on 16 and 17 July flying 10,895 miles, with 7 stops, and refueling in the air over long stretches.

July 19, 1952: USAF announced first successful flying of balloons at controlled constant altitudes in the stratosphere for periods over 3 days.

July 29, 1952: First nonstop transpacific flight by jet aircraft, an RB-45 from Elmendorf AFB, Alaska, to Yokota AB, Japan. Mackay Trophy for 1952 awarded.

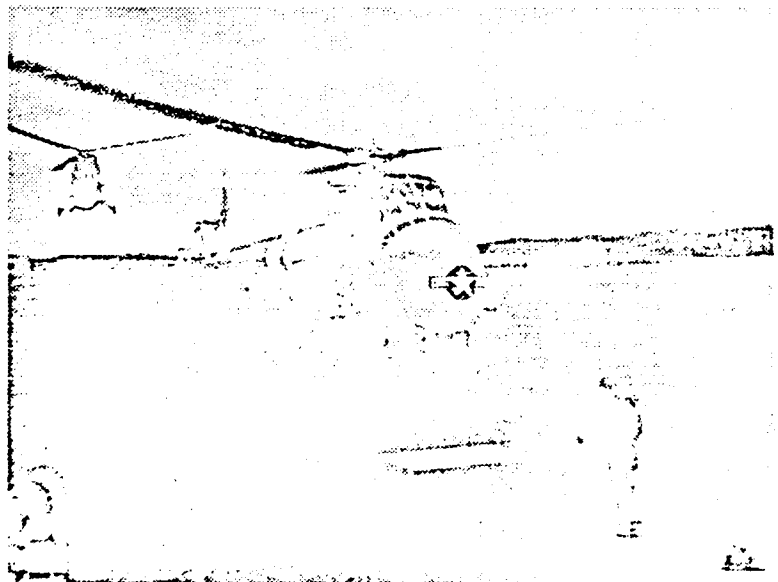
July 31, 1952: Two USAF MATS Sikorsky H-19 helicopters completed first transatlantic helicopter flight, having flown in five stages from Westover Field, Mass., to Prestwick, Scotland.

1952

January 7, 1952: USAF announced intention to increase effective combat strength 50 percent, personnel increase 20 percent, full 143-wing, 1,273,200-man Air Force.

January 8, 1952: Beginning of Exercise Snowfall, largest U.S. airlift of troops to date. January 8 through 13 approximately 100 planes of 516th Troop Carrier Wing airlifted 8,623 troops—Ft. Campbell, Ky., to Wheeler-Sack Army Air Field, N.Y.

April 15, 1952: YB-52, 8-jet prototype of B-52 bomber, made its first flight.



August 13, 1952: Air Force announced it had ordered the 8-jet Boeing B-52 heavy bomber into full-scale production.

September 18, 1952: U.S. and Denmark revealed that huge strategic air base being built at Thule, Greenland, 930 miles from North Pole.

September 30, 1952: Bell Rascal GAM-63 air-to-surface strategic missile launched for first time.

November 10, 1952: At Santa Susana, Calif., a complete liquidrocket engine assembly (*Navaho*) having a thrust in excess of 100,000 pounds fired for the first time.

November 26, 1952: A Northrop B-62 *Snark*, a turbojet-powered subsonic long-range (5,500 nautical miles) missile was launched for the first time from a zero-length launcher.

December 16, 1952: Tactical Air Command activated first Air Force helicopter squadron.

1953

February 8, 1953: Aviation Medicine recognized by American Medical Association as a medical specialty, first one to evolve from military practice and research.

May 25, 1953: George Welch, North American test pilot, flew prototype YF-100 Supersabre for first time, taking off and landing at Air Force Flight Test Center, Edwards AFB, Calif.

July 11, 1953: Maj. John F. Bolt, became first jet ace in Marine Corps history, while flying the F-86 on temporary duty with Air Force's 51st Fighter Interceptor Wing.

July 21, 1953: At San Diego, Navy publicly demonstrated world's first jet fighter seaplane, Sea Dart, equipped with hydro skis.

August 20, 1953: Seventeen USAF F-84G Thunderjets flew nonstop 4,485 miles from Albany, Ga., to Lakenheath, England, longest nonstop mass movement of fighter aircraft in history and greatest distance ever flown nonstop by single-engine jet fighters.

August 20, 1953: Redstone missile No. 1 fired by U.S. Army personnel at Air Force Missile Test Center, Cape Canaveral, Fla.

August 25, 1953: USAF announced that it had transformed its B-36 bomber into a "flying aircraft carrier" capable of launching and recovering jet fighters (F-84 *Thunderjet*) in flight.

August 28, 1953: At Santa Susana, Calif., a complete liquid-rocket engine assembly (*Navaho*) having thrust in excess of 200,000 pounds fired for the first time.

September 1, 1953: USAF announced first instance of aerial refueling of jet-powered aircraft by jet-powered aircraft, in which a standard B-47 Stratojet received fuel in the air from a KB-47B.

September 11, 1953: Sidewinder air-to-air missile made first successful interception, sending F6F drone down in flames.

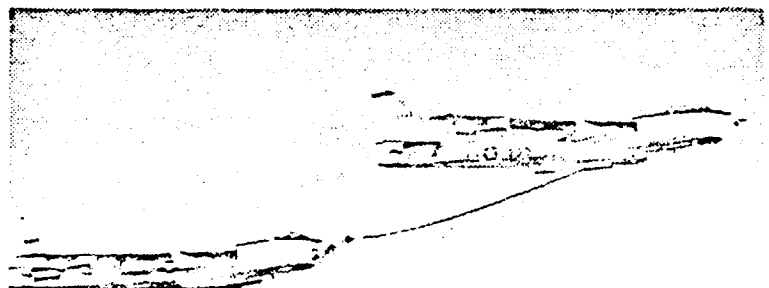
October 14, 1953: X10, prototype of the North American B-64 *Navaho* ramjet, propelled surface-to-surface guided missile, made initial flight.

December 12, 1953: A Bell X-1A launched from a B-36 bomber, Maj. C. E. Yeager, USAF, attained speed of 1,650 m.p.h. about twice that of sound, Edwards AFB, Calif.

1954

February 24, 1954: President Eisenhower approved National Security Council recommendation for construction of Distant Early Warning Line.

March 1, 1954: United States exploded first hydrogen bomb in Marshall Islands.



March 16, 1954: Representative W. Sterling Cole, Chairman of the Joint Atomic Energy Committee, reported United States had a hydrogen weapon which could be delivered by airplane to any target in the world.

March 20, 1954: Second explosion of the hydrogen bomb in Marshall Islands by U.S.

April 1, 1954: President Eisenhower signed into law a bill creating the Air Force Academy.

April 8, 1954: Office of Assistant Chief of Staff for Guided Missiles established in Hq. USAF.

April 17, 1954: U.S. Army revealed the Corporal (guided rocket) and the Honest John (ballistic rocket) being delivered to troops for tactical support of ground fighting.

June 2, 1954: J. F. Coleman piloted the Convair XYF-1, vertical takeoff aircraft, and made first free vertical takeoff and landing at Moffett Naval Air Station, Calif.

June 24, 1954: Harold E. Talbott, Secretary of the Air Force, announced the permanent location of the Air Force Academy would be a 15,000-acre tract of land 6 miles north of Colorado Springs, Colo.

July 1, 1954: USAF established the Western Development Division at Inglewood, Calif. Brig. Gen. Bernard A. Schriever, commander, directing the ballistic missile development program authorized by May 1954 directives.

July 15, 1954: First jet-powered transport built in U.S., Boeing 707, prototype for military Stratotanker and commercial Stratoliner, flight-tested near Seattle, Wash.

July 26, 1954: Lt. Gen. Hubert R. Harmon appointed first superintendent of Air Force Academy.

August 7, 1954: USAF revealed that School of Aviation Medicine had earlier received the "first piece of experimental equipment ever built specifically for the study of living conditions in space"—a sealed cabin—to simulate the interior of a spaceship.

September 1, 1954: Continental Air Defense Command—a joint command composed of Air Force, Army, Navy and Marine forces—established at Colorado Springs, Colo.

November 1, 1954: USAF B-29 *Superfortress*, last type of aircraft famed for having dropped atom bombs on Hiroshima and Nagasaki, Japan, withdrawn from service.

November 2, 1954: Test pilot, J. F. Coleman, flying Convair XYF-1, took off in vertical flight, shifted to horizontal, changed back to vertical for landing at San Diego.

December 7, 1954: USAF made first successful recovery of a missile (*Navaho* X-10) using a fully automatic approach and landing system, Edwards AFB, Calif.

December 10, 1954: In a rocket-propelled sled run, Col. John P. Stapp, USAF (MC), attained speed of 632 m.p.h. and sustained greater G-force than ever endured in recorded deceleration tests—the equivalent of mach 1.7 at 35,000 feet.

1955

March 8, 1955: USAF announced it had formed first unit of jet fighters capable of being launched and recovered by mother planes of 91st Strategic Reconnaissance Squadron—the F-84F Thunderstreak being teamed with B-36 bombers at Great Falls AFB, Mont.

April 6, 1955: Atomic guided missile, launched by a B-36 at height of 42,000 feet, exploded some 6 miles above Yucca Flat, Nev. Highest known altitude of any nuclear blast.

June 29, 1955: First Boeing B-52 *Stratofortress* into operational service in USAF delivered to the 93d Bomber Wing, Castle AFB, Calif.

July 2, 1955: Biggest troop airlift in history began at Donaldson AFB, S.C., resulting in movement of 3,900 paratroopers from U.S. to Japan and 3,100 from Japan to U.S.

July 11, 1955: Air Force Academy dedicated at temporary location, Lowry AFB, Colo., and first class consisting of 306 cadets sworn in.

July 29, 1955: White House Presidential Press Secretary James C. Haggerty announced U.S. plans to launch basketball sized earth satellite during International Geophysical Year (July 1957–December 1958).

August 1, 1955: Inauguration of first zero gravity research flights in T-33 jet trainers to study effects of weightlessness.

October 6, 1955: Department of Defense announced that it awarded a contract to Glenn L. Martin Co., as primary contractor for building of rocket vehicle for launching of an earth satellite. Martin authorized to contract with General Electric Co., for construction of rocket motor for launching vehicle.

October 22, 1955: Republic F-105A, fighter-bomber designed to carry nuclear weapons and support field armies, exceeded speed of sound on initial flight at Edwards AFB, Calif.

November 1, 1955: U.S.S. *Boston*, world's first guided-missile cruiser commissioned. Missile was the Terrier.

November 15, 1955: Exercise Sage Brush, largest joint exercise since World War II, tested the capability of Air Force and Army units to perform combat missions.

December 9, 1955: Responsibility for development of Thor IRBM assigned to Air Force Ballistic Missile Division.

1956

January 10, 1956: First U.S.-built liquid-rocket engine having thrust in excess of 400,000 pounds fired for first time at Santa Susana, Calif.

January 17, 1956: Department of Defense revealed existence of SAGE, an electronic air defense system.

March 12, 1956: Attack Squadron 83, equipped with F7U-3M *Cutlass* aircraft and Sparrow I missiles, left Norfolk for Mediterranean in first overseas employment of Navy missile squadron.

March 14, 1956: First Jupiter A (Redstone missile) launching accomplished at Cape Canaveral, Fla.

May 5, 1956: Press reports from Operation Redwing cited evidence that first shot of test series on Eniwetok Atoll had been a "pocket size" H-bomb small enough for delivery by small aircraft or missile.

May 21, 1956: At an altitude of 50,000 feet, Maj. David Crichlow, USAF, in a B-52 jet bomber dropped the first-known airborne H-bomb exploding over Bikini Atoll in the Pacific.

June 23, 1956: At Edwards AFB, Calif., Lt. Col. Frank K. Everest, USAF, flew Bell X-2 rocket-powered plane at record speed just over 1,900 m.p.h.

August 1, 1956: President Eisenhower signed into law bill permitting Armed Forces to include flight instruction in ROTC programs.

September 7, 1956: Capt. Iven C. Kincheloe set altitude record for manned flight at Edwards AFB, Calif., piloting a Bell X-2 rocket-powered aircraft to height of 126,200 feet.

September 15, 1956: 701st Tactical Missile Wing activated under 12th Air Force at Hahn AB, Germany.

September 20, 1956: The first Jupiter C (3-stage missile) launched at Cape Canaveral, Fla. It attained altitude of 680 miles, traveled 3,300 miles.

September 21, 1956: A Navy F11F-1 *Tiger*, flown by Gruman test pilot Tom Attridge, shot itself down while conducting test firings by running into 20-millimeter projectiles it had fired seconds earlier.

September 27, 1956: An X-2 rocket-powered plane, launched from a B-50 bomber, set speed record of 2,094 m.p.h. over Mojave Desert, Calif., flown by Capt. Milburn G. Apt. Flight killed pilot in aircraft crash.

October 2, 1956: Full-scale flight-test version of large guided missile, XSM-62 (N69D series) *Snark*, successfully recovered for first time after flight from Cape Canaveral.

October 8, 1956: The Military Air Transport Service and Department of Defense, announced that over 100,000 ocean crossings, carrying more than 400,000 passengers, 700,000 tons of mail and freight were made since 1948.

November 11, 1956: The USAF's first supersonic bomber, the Convair B-58 delta-winged *Hustler*, capable of flying at speed of 1,000 m.p.h., made its initial flight at Ft. Worth, Tex.

November 26, 1956: Secretary of Defense Wilson issued memorandum to the Armed Forces Policy Council fixing the areas of jurisdiction of three U.S. Armed Services in developing missiles of various ranges, giving USAF operational jurisdiction over long-range missiles.

November 30, 1956: Martin TM-61 Matador, a jet-propelled missile, completed final test-flight and became USAF's "first completely tactical missile."

December 13, 1956: Altitude of 198,770 feet reached by Maj. Arnold I. Beck, USAF, in an altitude chamber at Air Research and Development Command, Dayton, Ohio.

1957

January 18, 1957: Commanded by Maj. Gen. Archie J. Old, Jr., USAF, 3 B-52 *Stratofortresses* completed 24,325-mile round-the-world nonstop flight in 45 hours 19 minutes, average speed 534 m.p.h. First globe-circling nonstop flight by jet aircraft.

February 1, 1957: Boeing Airplane Co. announced the world's first jet tanker, KC-135, delivered to USAF late January 1957.

April 4, 1957: USAF announced it had awarded Rocketdyne Division of North American Aviation, Inc., contract to study possibilities of using ions as a source of power for space-ships and missiles.

April 12, 1957: USAF disclosed the Ryan X-13, jet research plane capable of vertical takeoff and landings, had flown successfully at Edwards AFB, Calif.

April 15, 1957: The 1st Missile Division, unit organized to plan and prepare for future operational missile units, activated at Los Angeles, Calif., as ARDC unit.

April 19, 1957: A Douglas Thor IRBM (XSM-75) successfully launched at Cape Canaveral, Fla.

June 2, 1957: Altitude-endurance record for manned, lighter-than-aircraft established by Capt. Joseph W. Kittinger, Jr., USAF; remained aloft in a balloon over Minnesota for 6 hours 34 minutes, above 96,000 feet for 2 hours.

June 6, 1957: Navy fighters flew nonstop from the *Bon Homme Richard* off the California coast to the *Saratoga*, off the Florida coast, in first carrier-to-carrier transcontinental flight.

June 27, 1957: SM-73 (*Goose*) first plastic airframe missile to fly. Also first missile to complete countdown, launch, and flight on first attempt.

July 1, 1957: The 704th Strategic Missile Wing, activated at Cooke AFB, Calif., to train with the *Snark* missile.

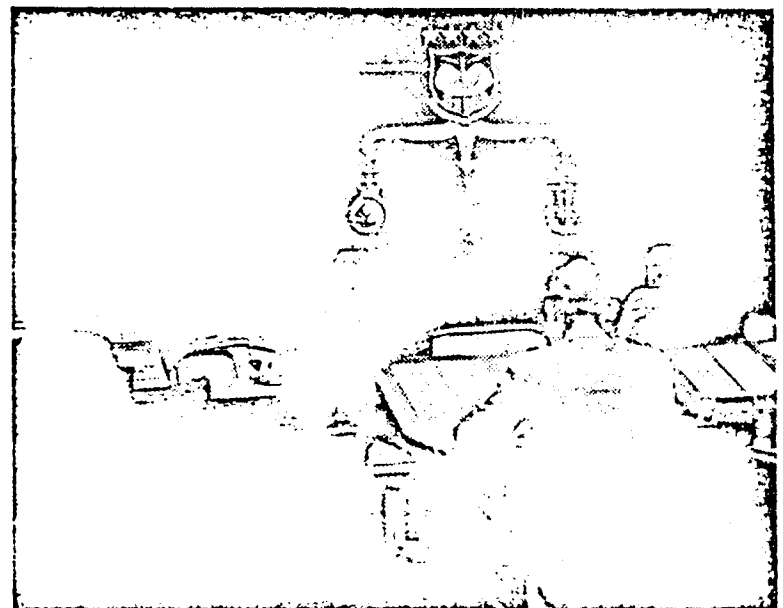
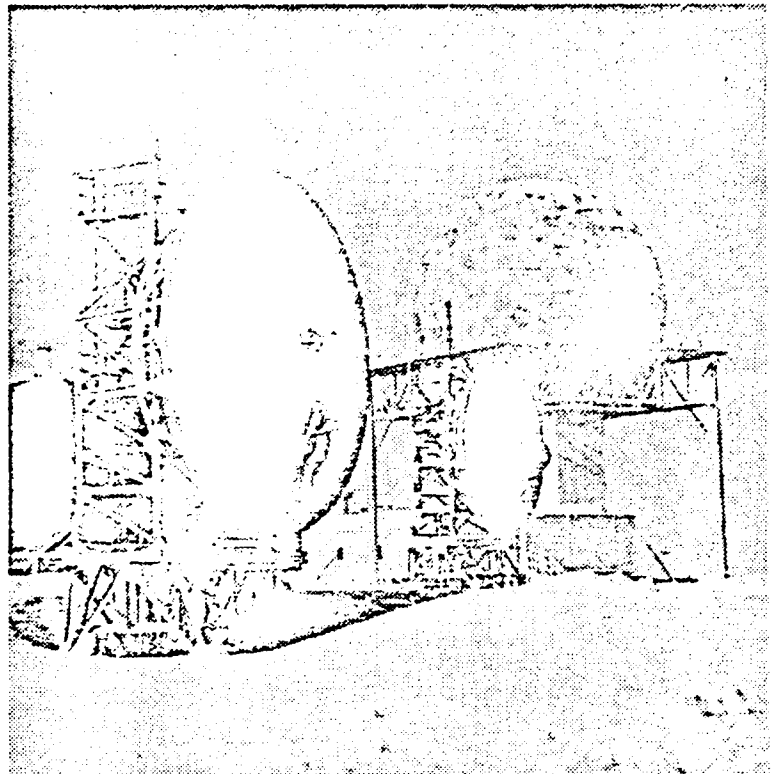
July 19, 1957: USAF fired first air-to-air nuclear defense rocket, the Douglas-built MB-1 *Genie*, from F-89J over Yucca Flat, Nev.

July 31, 1957: DEW Line, a distant early warning radar defense installation extending across Canadian Arctic, reported to be fully operational.

August 1, 1957: NORAD, a joint U.S.-Canadian North American Air Defense Command, informally established.

August 15, 1957: Gen. Nathan F. Twining became Chairman of the Joint Chiefs of Staff, first USAF officer to serve in this position.

August 19–20, 1957: Maj. David G. Simons, USAF, established world altitude record without payload for balloons (3,000,000 cubic feet) of 101,516 feet. He ascended at Crosby, Minn. and landed at Frederick, S. Dak.





General Nathan F. Twining, "Blue Leader" from July 1953 to June 1957 is only Air Force Chief named Chairman, Joint Chiefs of Staff.



General Thomas D. White, Chief of Staff from July 1957 to June 1961, was called Chief architect of ballistic missile, aerospace programs.

September 20, 1957: USAF Chief of Staff, Gen. Thomas D. White, announced development of radar units capable of detecting ICBMs at distance of 3,000 miles.

October 1, 1957: USAF military personnel for first time launched intercontinental missile, XSM-62 *Snark*, in flight

October 11, 1957: Thor missile launched at Cape Canaveral, Fla., second successfully tested, exceeded designed 1,500-mile range, landed in the Atlantic Ocean 2,000 miles from point of launching.

October 16, 1957: USAF successfully launched artificial meteors that traveled faster than 33,000 m.p.h.—8,000 m.p.h. faster than velocity necessary to escape from earth. (Carried by Aerobee rocket to height of 35 miles, nose section then ascended to height of 54 miles where shaped charges blasted the pellets into space.)

October 22, 1957: Operation Far Side, a fourth stage of rocket fired from a balloon at 100,000 feet above Eniwetok, penetrated at least 2,700 miles into outer space.

November 19, 1957: ANP (aircraft nuclear powered) project, integrated AEC-DOD atomic aircraft project within the AEC, with Maj. Gen. Donald Keirn, USAF, as head.

November 21, 1957: Department of Defense announced that the first ICBM base would be erected at Francis E. Warren AFB, Wyo.

November 29, 1957: During a speech at the National Press Club, Gen. Thomas D. White made first official disclosure that Air Force was "working on" an antimissile missile called Wizard.

November 29, 1957: Gen. Thomas D. White announced the ICBM and IRBM missile programs assigned to SAC. Announced that the 1st Missile Division being transferred to SAC and that San Bernardino Air Force Depot would be converted to support the long-range missile program.

December 10, 1957: USAF Deputy Chief of Staff for Development announced establishment of Directorate of Astronautics.

December 15, 1957: 556th Strategic Missile Squadron, first SM-62 *Snark* operational squadron, activated at Patrick AFB, Fla.

December 17, 1957: First successful USAF firing of Atlas ICBM; missile landed in target area after flight of 500 miles.

December 19, 1957: A Thor missile, eighth tested and fourth successfully, completed first fully guided IRBM flight using all-inertial guidance system.

1958

January 1, 1958: USAF activated the 672d Strategic Missile Squadron, Thor IRBM, Cooke AFB, with Col. Harry J. Zink, commander.

January 15, 1958: USAF activated the 475th Air Defense Missile Wing, assigned it the mission of developing and conducting a training program for Bomarc missile units.

January 29, 1958: Department of Defense announced plans to establish National Pacific Missile Range as part of Naval Air Missile Test Center at Point Mugu, Calif., the range to be designed for longrange guided-missile and ICBM testing.

January 31, 1958: Explorer I, first U.S. satellite to go into orbit, launched by Jupiter C rocket from Cape Canaveral, Fla.

February 4, 1958: Keel of the world's first nuclear powered aircraft carrier, U.S.S. *Enterprise*, laid at Newport News.

February 7, 1958: Department of Defense named Roy W. Johnson to head the Advanced Research Projects Agency, an organization established to develop outer space weapons, rockets, and other space vehicles.

February 8, 1958: USAF instituted systems management of ballistic missile early warning system when it contracted with RCA to manage existing communications facilities, including DEW Line and SAGE Systems, designed to provide maximum early warning to NORAD, SAC and civil defense agencies.

February 27, 1958: Missile Director William M. Holaday approved USAF's Minuteman Project, program for building 500-mile to 5,500-mile solid fuel ballistic missile that can be launched from underground installations.

March 17, 1958: Vanguard I, second U.S. satellite to go into orbit, launched from Cape Canaveral, Fla.

March 18, 1958: U.S. Navy fired Bull Goose, an intercontinental jet-propelled "decoy" missile designed to deceive enemy radar.

March 23, 1958: U.S. accomplished first underwater test-firing of dummy Polaris missile in a launching in the Pacific, San Clements Island. A "pop-up" launcher used.

March 26, 1958: Explorer III, third U.S. satellite to go into orbit, launched from Cape Canaveral, Fla.

April 5, 1958: USAF Atlas ICBM successfully flown from Cape Canaveral, Fla., to impact area some 600 miles away.

May 18, 1958: First U.S. full-scale nose cone recovered from Atlantic Ocean 4½ hours after beginning flight from Cape Canaveral, Fla., on Jupiter missile.

May 30, 1958: USAF disclosed development of air-to-air atomic missile—GAR-9.

June 27, 1958: At Cape Canaveral, Fla., USAF strategic missile squadron successfully completed first military launching of *Snark* intercontinental missile.

July 9, 1958: USAF Thor-Able reentry test vehicle, in first nose cone test at ICBM range and velocity, carried a mouse some 6,000 miles over the Atlantic Ocean in flight from Cape Canaveral to the Ascension Island area.

July 15, 1958: Lebanon asked U.S. for assistance; Tactical Air Command dispatched Composite Air Strike Force Bravo to Middle East in 12 hours.

July 26, 1958: Explorer IV, U.S. Army satellite, placed in orbit.

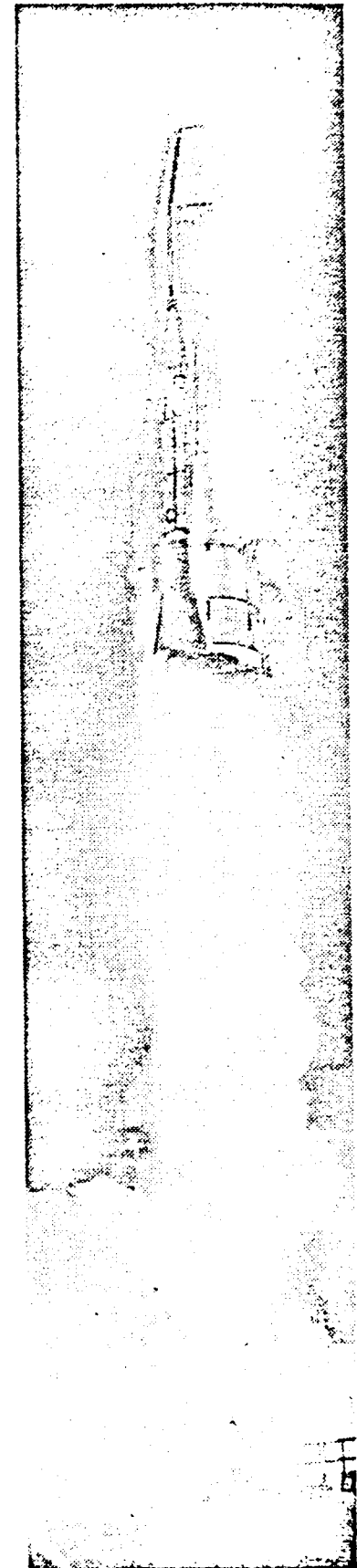
August 1, 1958: A missile borne nuclear weapon detonated at high altitude over Johnston Island in Pacific as part of program to develop an anti-ICBM defense.

August 2, 1958: Atlas-B ICBM, in first test with full propulsion system, flew 2,500 miles in launching from Cape Canaveral, Fla.

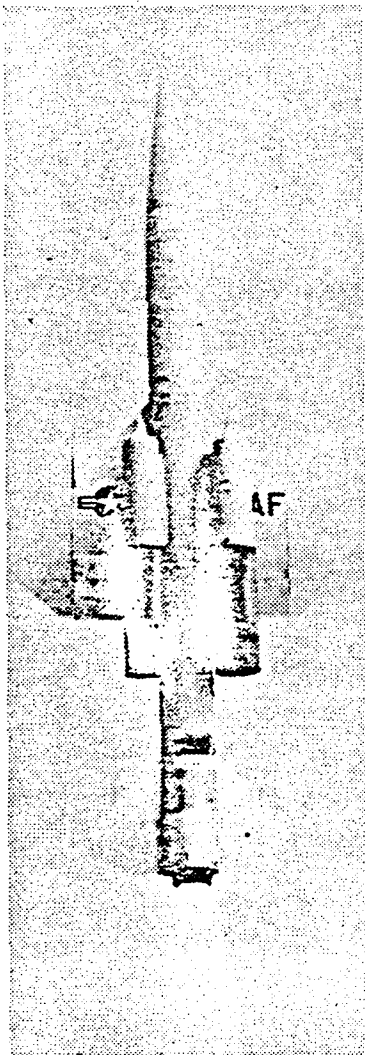
August 25, 1958: *Snark* missile launched by USAF's 556th Guided Missile Squadron on 6,000-mile course.

August 27, 1958: 27, 30 August and 6 September U.S. Navy in Project Argus, launched three multi-stage rockets from U.S.S. *Norton Sound* in South Atlantic. Each carried low-yield atomic device that detonated at an altitude of 300 miles.

August 28, 1958: An Atlas ICBM, launched from Cape Canaveral, accurately flew 3,000-mile course and landed in target area in first test of radio-command guidance system.



U.S. Air Force
ATLAS:
Space Booster.



U.S. Air Force
BOMARC:
Air defense missile.

September 24, 1958: A Bomarc missile, launched from Cape Canaveral by SAGE unit in Kingston, N.Y., destroyed 1,000 m.p.h. target flying 48,000 feet over Atlantic Ocean at distance of 75 miles.

September 30, 1958: National Advisory Committee for Aeronautics issued its final annual report, and ceased to exist. All would be absorbed by National Aeronautics and Space Administration to be established the following day.

October 1, 1958: Establishment of National Aeronautics and Space Administration, to control nonmilitary scientific space projects.

October 11, 1958: USAF-launched Pioneer I, lunar probe vehicle, attained height of approximately 80,000 miles before falling back to the earth on 13 October.

November 28, 1958: An Atlas ICBM flew its full-range distance of some 6,000 miles for the first time from Cape Canaveral to Ascension Island area.

December 16, 1958: The Pacific Missile Range began launching operations with successful flight of Thor missile, first ballistic missile launched over Pacific Ocean. (The first Free World firing of ballistic missile under simulated combat conditions.)

December 18, 1958: USAF placed in orbit fifth artificial satellite, 4-ton Atlas (Project Score), communications relay vehicle. On 19 Dec. the satellite broadcast taped-recording of President Eisenhower's Christmas message.

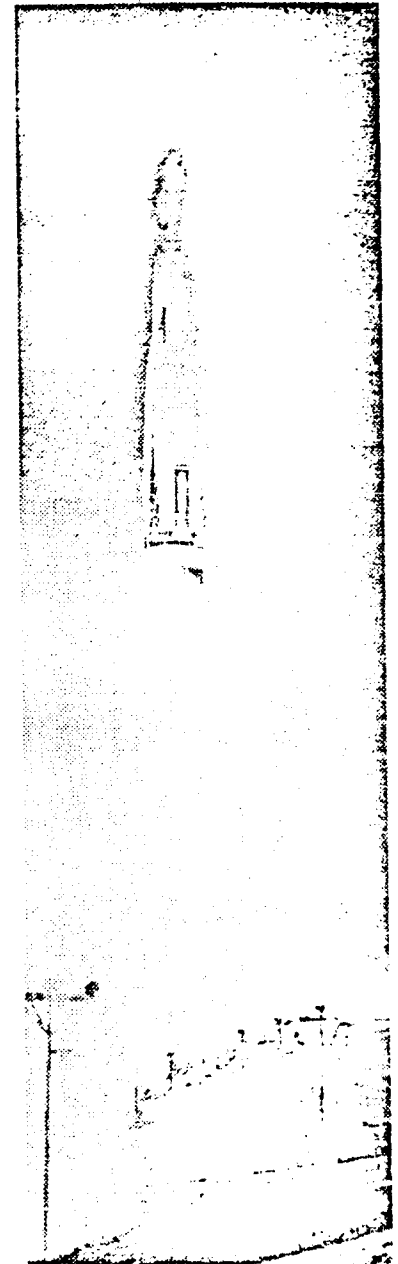
1959

January 15, 1959: SAC, in GO No. 84, 12 Dec 58, ordered first integration of missile and bomber forces by transferring the 703d Strategic Missile Wing (ICBM-Titan) and the 706th Strategic Missile Wing (ICBM-Atlas) from 1st Missile Division to 15th Air Force.

January 21, 1959: U.S. Army's first tactical Jupiter missile struck target area after 1,700-mile flight test.

February 1, 1959: Operational control of DEW Line transferred from USAF to Royal Canadian Air Force.

February 6, 1959: USAF successfully launched first Titan ICBM.



U.S. Air Force
TITAN:
Storable liquid ICBM.

February 17, 1959: U.S. Navy launched Vanguard II weather-reporting satellite into orbit.

February 28, 1959: USAF successfully launched the Discoverer I satellite into polar orbit from Vandenberg AFB, Calif.

April 6, 1959: Announcement made that seven pilots from U.S. armed services had been chosen for Mercury astronaut program established to train first U.S. space pilot.

April 20, 1959: Prototype Polaris missile of U.S. Navy successfully flew 500-mile course.

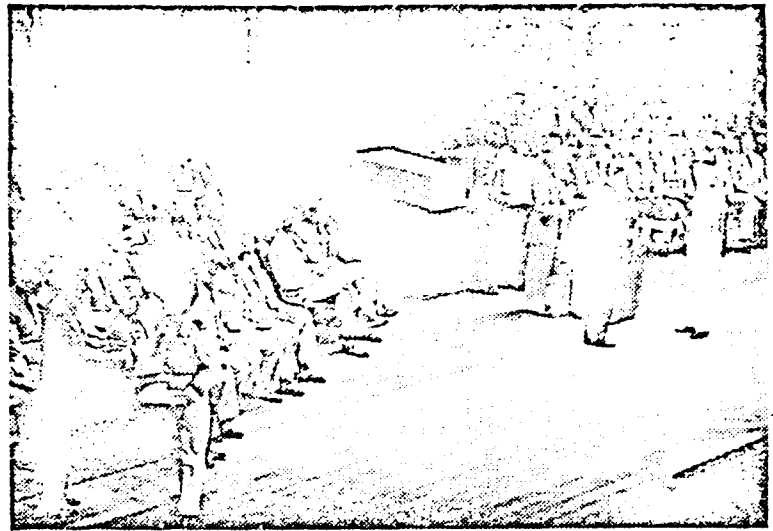
April 23, 1959: The GAM-77 *Hound Dog*, supersonic air-launched strategic missile designed to deliver a nuclear warhead over distance of several hundred miles, test fired for the first time from B-52 bomber at Eglin AFB, Fla.

May 28, 1959: Monkeys Able and Baker recovered alive from the Atlantic Ocean near Antigua Island after flight to altitude of 300 miles in the nose cone of Jupiter missile launched from Cape Canaveral.

June 3, 1959: Air Force Academy graduated first class, 207 graduates, 205 commissioned as Regular Officers in USAF.

June 8, 1959: Piloted by Scott Crossfield, the 7½-ton X-15 rocket plane, designed for speeds up to 4,000 m.p.h. and altitudes to 100 miles, dropped from a B-52 more than 7 miles above the Mojave Desert for a non-powered glide test—its first free flight.

August 7, 1959: Two USAF F-100Fs made first flight by jet fighter aircraft over North Pole.



August 13, 1959: USAF used a Thor-Agena rocket to launch Discoverer V, satellite with nose cone reentry capsule, into polar orbit from Pacific Missile Range. Satellite fell from orbit on 16 Sept. without recovery.

August 24, 1959: USAF fired Atlas-C over a 5,000-mile course and recovered its data capsule containing movies made at altitude of 700 miles showing one-sixth of surface of the earth.

August 27, 1959: U.S. Navy's Polaris missile, first successful launching at sea, fired from ship Observation Island.

September 1, 1959: At Vandenberg AFB, USAF formally transferred to SAC management of the operational Atlas.

September 9, 1959: Atlas fired for the first time by SAC crew from Vandenberg AFB; was declared operational by the commander in chief SAC. Shot traveled about 4,300 miles at 16,000 m.p.h.

October 1, 1959: USAF Aerospace Medical Center activated at Brooks AFB, Tex., absorbing the former School of Aviation Medicine, the USAF Hospital at Lackland AFB, and other facilities.

October 14, 1959: U.S. Army Nike-Zeus antimissile "bird" made first test flight.

November 16, 1959: Capt. Joseph W. Kittinger, Jr., USAF, set 3 unofficial world aerial records, ascending in an open balloon gondola to altitude of 76,400 feet, made a parachute jump of 76,400 feet, experiencing longest free fall in history, 64,000 feet—2 minutes 58 seconds—White Sands, N. Mex.

December 30, 1959: First fleet ballistic missile submarine nuclear-powered George Washington, commissioned at Groton, Conn.

1960

January 25, 1960: An Army Hawk downed an Honest John in "first known kill of a ballistic missile" by an antiaircraft missile.

February 9, 1960: USAF dedicated National Space Surveillance Control Center, Bedford, Mass.

March 25, 1960: First launch of guided missile from nuclear powered submarine, Halibut, fired Regulus I off Oahu.

June 10, 1960: U.S. Army report revealed Nike-Hercules shot down Corporal in first known instance of one guided missile intercepting and downing another.

July 20, 1960: First submerged submarine launched Polaris missile, U.S. *George Washington*, 30 miles off Cape Canaveral to predetermined impact area, 1,150 nautical miles down the Atlantic Missile Range.

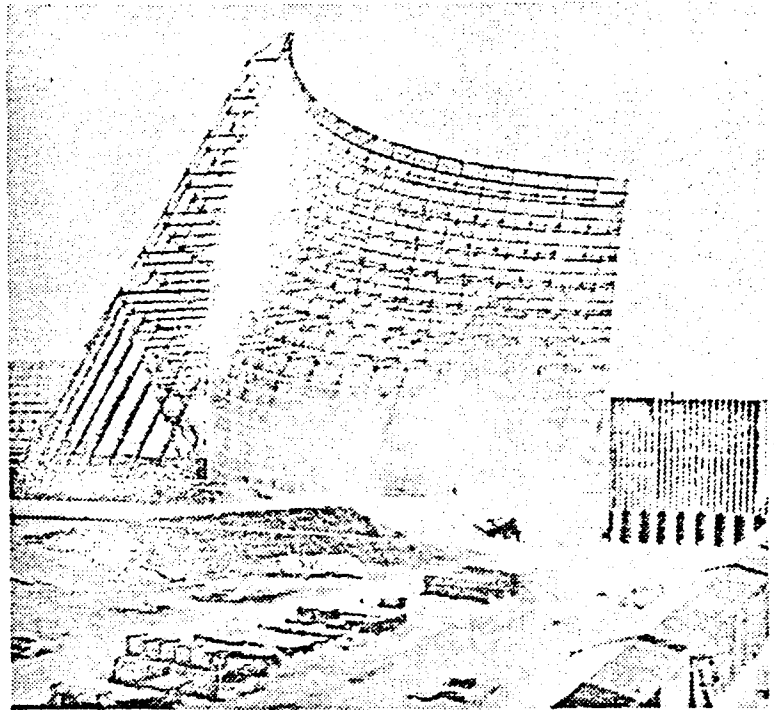
July 26, 1960: U.S. Army's solid-propellant Pershing missile successfully launched from a mobile tactical launcher.

August 9, 1960: First U.S. launching base for ICBMs began functioning when SAC formally disclosed three Atlas launching pads at Francis E. Warren AFB operational.

August 11, 1960: Recovery of 300-pound capsule ejected by USAF's Discoverer XIII marked first recovery of an object ejected by orbiting satellite. Planned aerial retrieval abandoned when capsule landed outside designated area; recovery made by USN frogmen.

August 19, 1960: Capt. Harold F. Mitchell, USAF, piloted a 6594th Recovery Squadron C-119 making first successful aerial retrieval of orbited capsule. Capsule ejected by Discoverer XIV, launched from Vandenberg AFB on 18 Aug. 60.

August 30, 1960: Six Atlas missiles of 564th Strategic Missile Squadron were declared operational—first ICBM squadron to become fully operational.



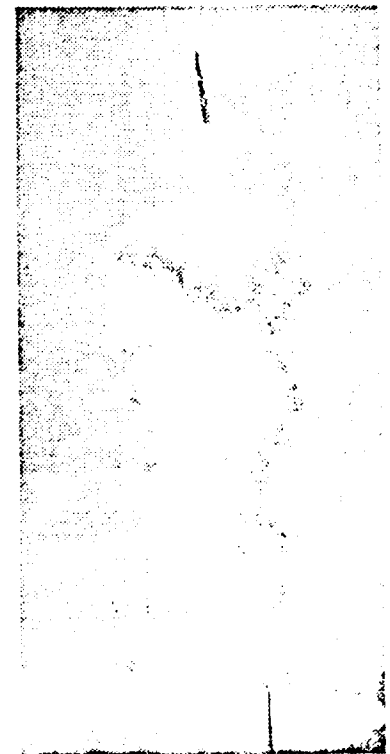
October 1, 1960: Ballistic Missile Early Warning System radar post at Thule began regular operations; part of chain of three planned installations to warn of air or missile attacks on North America over an Arctic route.

February 1, 1961: Minuteman ICBM launched for first time at Cape Canaveral in major test. Under full guidance, traveled 4,600 miles, impacting the target area.

December 19, 1960: Unmanned test of Mercury space capsule. NASA used Redstone rocket booster to launch the capsule from Cape Canaveral. Vehicle attained speed of 4,200 m.p.h.; height of 135 miles; distance of 235 miles. Landed safely by parachute, it was recovered within 32 minutes.

1961

January 31, 1961: A Mercury space capsule with Ham, a chimpanzee, as passenger launched from Cape Canaveral by Redstone booster on 18-minute, 420-mile flight. Ham performed well during flight and apparently suffered no ill effects from stresses to which he was subjected.



February 9, 1961: Gen. Thomas D. White, Chief of Staff, USAF, transferred space surveillance functions from ARDC to ADC, established SPADATS (space detection and tracking system).

February 13, 1961: USAF successfully launched its new solid-fuel, air-to-surface missile, GAM-83B, at supersonic speed from F-100 *Supersabre*. Modified version of USN's *Bullpup* missile, GAM-83B can carry a nuclear weapon or can be guided to target by pilot of the parent airplane.

February 16, 1961: NASA launched first satellite from its Wallops Station when its four-stage Scout booster lifted Explorer IX into orbit around the earth. First satellite to be launched by U.S. with a solid-fueled rocket, a sphere, commonly identified as "polka-dot" balloon, which inflated to 15 foot diameter at orbital altitude.

February 21, 1961: Final training for first Mercury flights began with naming of Alan B. Shepard, Jr., Virgil I. Grissom, and John H. Glenn, Jr., to begin final training for early ballistic flight.

March 2, 1961: First ship-board firing of advanced Polaris A-2 missile made from U.S.S. *Observation Island*, 10 miles off Cape Canaveral.

March 7, 1961: The *Quail*, a diversionary missile (GAM-72A) to be used with B-52, declared operational by SAC.

April 17, 1961: Constant-altitude balloon, launched at Vernalis, Calif., by USAF's Cambridge Research Center, remained at 70,000 feet for 9 days with 40-pound payload.

April 28, 1961: A stratolab high balloon in test flight from carrier, U.S.S. *Antietam*, rose 6,000 feet over Gulf of Mexico to become the first manned balloon launched from, and to land back aboard a naval vessel.

May 3, 1961: U.S. launched first ICBM from underground silo when USAF fired a Titan from the test facility at Vandenberg AFB, Calif.

May 5, 1961: Comdr. Alan B. Shepard, Jr., USN, became first Project Mercury astronaut to cross the space frontier, on a 14.8 minute flight that reached altitude of 115 miles, carrying him 302 miles to landing in the Atlantic after a launching from Cape Canaveral. His maximum speed, in the Friendship 7 capsule, 5,100 m.p.h.

June 1, 1961: Kincheloe AFB, Mich., first Bomarc-B site declared in operational readiness.

June 3, 1961: USAF test fired most powerful solid-fuel rocket engine known to Western scientists. In Sacramento, Calif., test some 94,000 pounds of propellant produced in excess of 500,000 pounds of thrust.

June 9, 1961: Delivery of first C-135 *Stratolifter* jet cargo aircraft marked the beginning of modernization of MATS former all-propeller driven fleet.

July 1, 1961: NORAD began operation of SPADATS (space detection and tracking system) designed to provide electronic cataloging of man-made space objects.

July 21, 1961: America's second Project Mercury astronaut, Capt. Virgil I. Grissom, USAF, attained altitude of 118 miles and speed of 5,310 m.p.h. in a 303-mile suborbital space flight from Cape Canaveral in the Liberty Bell 7 capsule launched by a Mercury-Redstone 4 booster.

August 8, 1961: USAF launched Atlas F missile from Cape Canaveral for the first time. "F" missile, designed for long-term storage of liquid fuels and for shortened countdown, was the only Atlas model destined for emplacement in hardened underground silos.

August 8, 1961: Operation Swift Strike, joint USAF-Army exercise, began at Ft. Bragg, N.C., when USAF airplanes arrived with 7,500 troops of 82d Airborne Division who parachuted into area.

August 12, 1961: U.S.S. *Abraham Lincoln* set new record—underwater launch of six Polaris missiles in 1 day.

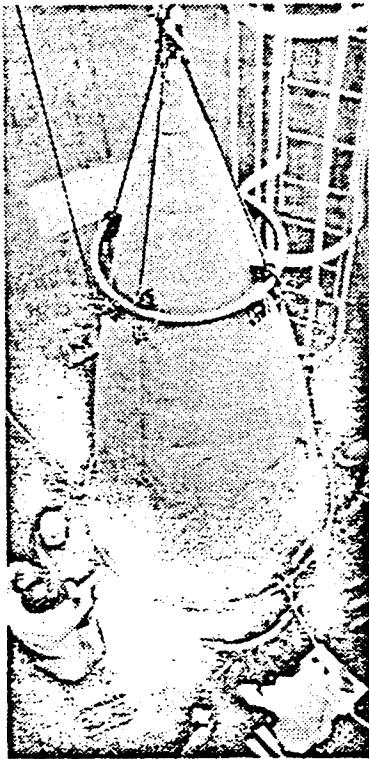
August 17, 1961: USAF Bomarc-B flew one of most critical profile flights of its history—destroying B-47 drone at minimum range of 50 nautical miles and altitude of 5,000 feet.

September 13, 1961: World-wide Mercury tracking network used for first time in observing the orbit of an unmanned Mercury vehicle. Test convinced NASA that Atlas vehicle was capable of launching a man into orbit.

September 19, 1961: NASA announced location of its future Manned Spacecraft Center near Houston, Tex.

September 19, 1961: USAF's Sage Center at Gunter AFB, Ala., controlled flight of a Bomarc-B missile from launch at Eglin AFB, Fla., to interception of a Regulus II supersonic drone at an altitude of 7 miles and distance of 250 miles off Florida coast. The missile successfully made a U-turn maneuver.

October 14, 1961: NORAD conducted Operation Sky Shield II, largest air defense exercise in Western Hemisphere, involving thousands of NORAD and SAC aircraft and sorties, and grounding all commercial aircraft for 12 hours.



November 29, 1961: NASA's Mercury vehicle, containing two chimpanzees, successfully completed two-orbit flight around the earth after launch from Cape Canaveral.

December 15, 1961: USAF graduated first class of five military space pilots from 8-month Aerospace Research Pilots School.

December 15, 1961: NO-RAD's Sage system became fully operational with completion of its 21st and last control center at Sioux City, Iowa.

1962

January 20, 1962: A SAC combat crew launched a Titan missile for the first time in a firing from Vandenberg AFB, Calif.

January 29, 1962: Last Titan I test fired from Cape Canaveral on a 5,000-mile flight. Of 47 shots, 34 had been successful, 9 partially successful and 4 unsuccessful.

February 4, 1962: Kennedy Administration ordered use of Greek-letter designations for military satellites in effort to keep secret their purpose and performance in reporting launchings to the U.N.

February 15, 1962: In fifth consecutive silo launching, a Minuteman set a new record by flying 3,900 miles, farther than previous silo-launched vehicles of this type.

February 20, 1962: Lt. Col. John H. Glenn, Jr., USMC, completed a three-orbit flight around the earth in Friendship 7, a Mercury spacecraft, and became America's first orbital flyer. After 4 hours 56 minutes of flight, he parachuted into the Atlantic east of Grand Turk Island.

February 28, 1962: In first manned test of a steel, cocoon-type escape capsule, CWO Edward J. Murray, USAF, ejected from B-58 flying 565 m.p.h. at 20,000 feet. After 26-second free fall, parachute opened and landed him safely, 8 minutes after ejection.

March 2, 1962: Operation Bristle Cone, 12-day exercise, began to test Air Force-Army capability of airlifting 40,000 troops from Ft. Lewis, Wash., and Ft. Riley, Kans., to George AFB, Calif.

March 21, 1962: A bear became first living creature ejected from a supersonic aircraft, when the USAF tested an escape capsule designed for installation in B-58. Ejected at 35,000 feet from a B-58 flying 870 m.p.h., it landed unharmed 7 minutes 49 seconds later.

April 12, 1962: U.S. Army made its first successful test flight of all three stages of Nike-Zeus antimissile missile in launch from Point Mugu, Calif.

April 18, 1962: At Lowry AFB, Colo., SAC accepted first Titan I squadron (nine missiles)—first U.S. missiles operational in hardened underground installations.

April 24, 1962: USAF used orbiting satellite for first time to relay transmission of TV photographs, Camp Parks, Calif., to Westford, Mass.

May 7, 1962: Submerged U.S.S. *Ethan Allen* successfully launched a Polaris missile on full-flight test with live warhead as part of Operation Dominic series in Pacific. Reportedly, this was first U.S. firing of missile with live nuclear warhead.

May 10, 1962: Completing 3-year flight test period, USAF Bomarc-A, launched from Eglin AFB, intercepted an F-104 at a distance of 150 miles.

October 23, 1961: Polaris A-2 R&D missile, launched from submerged submarine U.S.S. *Ethan Allen*, marked first underwater launching of this model from a submarine.

November 9, 1961: Maj. R. White, USAF, attained a top speed of 4,093 m.p.h. in X-15, while flying at full throttle at an altitude of 101,600 feet.

November 17, 1961: USAF successfully launched first Minuteman from an underground silo at Cape Canaveral. It flew 3,000 miles down the Atlantic Missile Range.

November 21, 1961: USAF crew test-fired its first Titan when members of 6555th Aerospace Test Wing launched test missile on 5,000 mile flight from Cape Canaveral.

May 24, 1962: Lt. Comdr. M. S. Carpenter, USN, became second U.S. pilot to orbit the earth as his Mercury spacecraft, Aurora 7, made three successful orbits, and landed in the Atlantic 300 miles east of planned landing area.

June 1, 1962: USAF launched Oscar II, 10-pound satellite, piggyback on a Thor-Agena B rocket from Vandenberg AFB. Launched for American Radio Relay League, Oscar II transmitted radio signals in Morse code for amateur radio operators' use.

June 18, 1962: USAF's Aerospace Research Pilot School, the first for "operational" personnel, began 7-month course at Edwards AFB, Calif.

June 19, 1962: USAF super-pressure balloon, launched at Kindley AFB, Bermuda, 31 May 1962, landed near Iwo Jima after 19-day flight at constant altitude of 68,000 feet.

June 19, 1962: Astronaut Capt. Virgil I. Grissom, USAF, received first Gen. Thomas D. White Space Trophy from Secretary of the Air Force Eugene M. Zuckert for his "outstanding contribution to the Nation's progress in aerospace."

June 25, 1962: USAF Office of Aerospace Research announced establishment of basic research laboratory at Air Force Academy, to provide in-house OAR research capability and enable teaching faculty and honor students to conduct research.

June 29, 1962: First Minuteman, launched by military crew, fired by a USAF team from underground silo at Cape Canaveral to target area 2,300 miles downrange.

July 8, 1962: A Thor rocket carried a megaton-plus hydrogen device to an altitude above 200 miles in launch from Johnston Island in Operation Dominic. Detonation of device at that altitude marked the highest thermonuclear blast by a U.S. instrument and, perhaps, highest of any nation.

July 17, 1962: Maj. R. White, USAF, piloted X-15-1 to a world record altitude of 58.7 miles, during which X-15 achieved its original design altitude. Maximum speed was 3,784 m.p.h.

July 18, 1962: NASA achieved a new record for size of manmade articles in space when it launched "Big Shot", a rigidized Echo-type balloon, from Cape Canaveral in nose of a Thor rocket. Inflated at altitude of 922 miles, the balloon was as tall as a 13-story building.

July 19, 1962: A Nike-Zeus antimissile fired from Kwajalein Island made first known interception of an ICBM when it intercepted a nose cone of an Atlas missile launched from Vandenberg AFB.

August 1, 1962: USAF launched first Atlas F from an underground silo on a successful 5,000-mile flight from Vandenberg AFB to vicinity of Marshall Islands.

August 9, 1962: USAF gave the first U.S. demonstration of multiple-countdown capability by launching two Atlas D missiles in rapid succession from Cape Canaveral on 5,000-mile flights.

October 3, 1962: Mercury Astronaut Comdr. Walter M. Schirra, Jr., USN, became third U.S. pilot to orbit the earth when his Sigma 7 spacecraft made five complete orbits and landed in the Pacific near end of its sixth orbit after 9 hours 14 minutes in flight.

October 14, 1962: An Air Force reconnaissance flight proved the existence of Russian missile sites in Cuba.

December 5, 1962: USAF completed flight-test program of the Atlas missile with launch of an "F" model from Cape Canaveral on 5,000-mile flight. Of 151 missiles launched, 108 made successful flights...

December 7, 1962: USAF fired a Minuteman on 3,500-mile flight from Cape Canaveral as part of program to evaluate operational missile's performance.

December 10, 1962: U.S. Army fired its Pershing rocket, solid-fueled replacement for Redstone, from Cape Canaveral, and guided it through a series of zig-zag maneuvers to test its guidance system.

December 13-14, 1962: USAF's Project Stargazer balloon, manned by Capt. Joseph A. Kittinger, Jr., USAF, and William C. White, USN civilian astronomer, reached altitude of 82,000 feet in 18½-hour flight over southwestern N. Mex. A telescope mounted atop the gondola gave White the clearest celestial view ever experienced by an astronomer.

December 14, 1962: Mariner II, launched 27 Aug. 1962, scanned the atmosphere and surface of Venus with instruments for 42 minutes as it passed within 21,100 miles of the planet. The probe later began a solar orbit.

December 22, 1962: U.S. Army Nike-Zeus antimissile missile fired from Kwajalein Island intercepted an Atlas missile launched on 4,800-mile flight from Vandenberg AFB. In what was believed the first instance of a Nike-Zeus discriminating between an intended target and accompanying decoys.

December 31, 1962: U.S. Navy announced end of its lighter-than-air flights, having disposed of its last airship, spare parts, and other equipment.

1963

February 6, 1963: 6555th Aerospace Test Wing crew became first Air Force unit to launch a Titan II missile in a firing from Cape Canaveral, Fla.

March 1, 1963: Air Force achieved its first successful launch in the ABRES (Advanced Ballistic Reentry System) series in firing from Cape Canaveral, Fla.

March 22, 1963: National Rocket Club presented to Lt. Col. John H. Glenn, USMC, astronaut of America's first orbital manned space capsule, the Robert H. Goddard Memorial Trophy for 1963 for his achievement in assisting the advance of missile, rocket, and space flight programs.

May 7, 1963: Dr. Theodore von Karman, distinguished U.S. physicist, died in Aachen, West Germany, a few days before his 82d birthday.

May 15, 1963: Astronaut Maj. L. Gordon Cooper, Jr., USAF, launched from Cape Canaveral, Fla., in Project Mercury capsule Faith 7. On 16 May after completing 22 orbits of earth in 34 hours 19 minutes 49 seconds, he landed in the Pacific about 60 miles southeast of Midway Island. He was first American to orbit the earth for more than 1 day, and the last pilot of Project Mercury series.

May 19-21, 1963: Thirty world records (FAI course) established in the U.S. Presidential aircraft, a VC-137C, by Col. James B. Swindal in flights from Washington, D.C., to Moscow and return. Washington-Moscow flight (19 May) made at speed of 561.6 m.p.h. in 8 hours 39 minutes 2.2 seconds. Return flight, Moscow-Washington, D.C., (20-21 May) made at speed of 490.6 m.p.h. in 9 hours 54 minutes 48.5 seconds. Fifteen records established on each one-way flight.

June 8, 1963: 570th Strategic Missile Squadron, the first Titan II ICBM squadron to be operational, activated at Davis-Monthan AFB, Ariz. and assigned to Strategic Air Command.

June 17, 1963: First successful firing at sea of Polaris A-3 made from U.S.S. *Observation Island*.

June 18, 1963: Strategic Air Command crew launched Minuteman ICBM for first time under fully simulated combat conditions.

June 26, 1963: NASA's Syncom II communications satellite launched into orbit by Thor-Delta launch vehicle from Cape Canaveral, Fla. Five hours 33 minutes later, apogee-kick motor on board fired for 21 seconds, placing the satellite in orbital path ranging from 22,300 to 22,548 miles altitude and adjusting speed to near-synchronous 6,800 m.p.h. It was world's first satellite placed into synchronous orbit and successfully maneuvered into position.

June 27, 1963: Air Force Maj. Robert A. Rushworth piloted X-15 to an altitude of 285,000 feet to become second military pilot to earn astronaut's wings for space flight in a winged aircraft.

July 20, 1963: United Technology Center for first time fired its 1205-1, a 250-ton, 120-inch solid-fuel rocket motor designed for use in the Air Force's Titan IIIC. The motor produced more than 1,000,000 pounds of thrust.

August 1, 1963: NASA's Mariner II, launched by Air Force on 27 Aug. 62 from Cape Canaveral, Fla., completed its first orbit around the Sun. It traveled approximately 540 million miles to complete the first solar orbit.

October 1, 1963: Rear Adm. James R. Reedy made first trans-polar non-stop flight from Capetown, South Africa to McMurdo Sound, Antarctica, in ski-equipped Lockheed C-130 *Hercules*. Flight covered 4,700 miles in 14 hours 31 minutes, and crossed entire Antarctic continent.

October 10, 1963: Seven original members of Project Mercury astronaut team received the Collier Trophy.

October 16, 1963: Air Force inaugurated space nuclear detection system by launching from Cape Canaveral, Fla., twin satellites designed to assume circular 57,000-mile-high orbits on opposite sides of the Earth. The 475-pound, 20-sided satellites, known as Project Vela Hotel or Project 823, designed to detect nuclear explosions from distances of 186,000,000 miles.

October 22-24, 1963: In Exercise Big Lift, the Air Force airlifted more than 15,000 men of 2d Armored Division and its supporting units from Ft. Hood, Tex., to bases near Frankfurt, West Germany. In completing the movement in 63 hours 5 minutes, Military Air Transport Service (MATS) flew 223 missions without a fatality.

November 20, 1963: USN's Point Arguello, Calif., missile facility and space-tracking stations transferred to the U.S. Air Force by Department of Defense.

November 29, 1963: By Executive Order, President Johnson renamed Cape Canaveral as Cape Kennedy, and redesignated space facilities there as the John F. Kennedy Space Center.

December 10, 1963: Secretary of Defense Robert S. McNamara announced cancellation of Dyna-Soar, and assigned to the Air Force a new program for development of a near-Earth Manned Orbiting Laboratory (MOL).

December 17, 1963: Air Force's new C-141A *Starlifter* jet cargo transport flew for first time (55 minutes) at Dobbins AFB, Ga. Capable of crossing any ocean nonstop at more than 500 miles per hour, *Starlifter* can transport 154 troops, 123 paratroopers, or a combination of men and supplies. It can carry a 70,000-pound payload.

1964

February 29, 1964: President Johnson revealed publicly for first time, existence of Lockheed-built A-11, a jet interceptor designed to attain a speed in excess of 2,000 m.p.h. and altitudes over 70,000 feet. (A-11 later designated YF-12A.)

April 8, 1964: First unmanned Gemini spacecraft boosted into orbit by Air Force Titan II launch booster.

May 11, 1964: U.S. Air Force's XB-70 *Valkyrie*, built by North American Aviation, rolled out at Palmdale, Calif. Designed to fly at three times the speed of sound and at altitudes above 70,000 feet, the 275-ton aircraft measures 185 feet in length and 105 feet in wing span.

June 6, 1964: Team of nine Marine Corps parachutists claimed new world's record for seven-eight- and nine-man team jumps at night after free-falling from 44,100 feet to 1,800 feet before opening their parachutes. They jumped from a Marine Corps KC-130F at Ft. Bragg, N.C.

July 27, 1964: The 1964 Daniel Guggenheim Medal awarded posthumously to Dr. Robert H. Goddard.

July 28, 1964: NASA's Ranger VII spacecraft launched from Cape Kennedy, Fla. on flight to the Moon. On 31 July, Ranger VII completed its mission of taking and relaying 4,316 high-quality closeup pictures of lunar surface before crashing into an area northwest of the Sea of Clouds.

August 5, 1964: National Academy of Sciences established 10-man committee to study effect of sonic boom phenomena in development of supersonic transport. Test program operation would continue to be managed by FAA with support from NASA and USAF.

August 19, 1964: Syncom III communications satellite launched by Thor-Delta launch vehicle. After several weeks of minor maneuvers, by 23 Sept it achieved almost perfect stationary position (apogee 22,311 miles, perigee 22,164 miles) above Equator and International Date Line. For 15 days from 7 Oct, it transmitted Olympic Games from Tokyo, Japan. It became world's first geostationary satellite.

September 1, 1964: Air Force Captains Albert R. Crews and Richard E. Lawyer completed 2-week stay in simulated space cabin at G.E. Space Center, Valley Forge, Pa. According to officials, test showed that man can perform more tasks in extended space flight than previously supposed.

September 11, 1964: Air Force announced retirement of two squadrons of Atlas ICBMs and impending retirement of 105 liquid-fueled missiles made obsolete by the Minuteman.

September 16, 1964: President Johnson presented Harmon International Aviation Trophies to the following: 1963 award to Lt. Col. Fitzhugh L. Fulton, Jr., USAF, for piloting B-58 to world altitude record of 85,360.8 feet with payloads of 4,409.2 and 11,023 lbs. 1964 award to astronaut Maj. L. Gordon Cooper, USAF, for 22-orbit flight in the Faith 7 Mercury spacecraft. 1964 Harmon Aviation Trophy to Mrs. Betty Miller, first woman to fly solo east-to-west transpacific.

September 17, 1964: President Johnson announced that United States was installing recently developed over-the-horizon type radar capable of "seeing" around the curvature of the Earth and of detecting a missile shortly after its launch.

September 21, 1964: Air Force Secretary Eugene M. Zuckert presented Gen. Thomas D. White Space Trophy to Air Force Maj. L. Gordon Cooper for orbiting the Earth in Project Mercury spacecraft for approximately 34 hours 20 minutes, on 15-16 May 1963.

September 21, 1964: At Palmdale Calif., the B-70, redesignated the XB-70A, flew for the first time.

September 24, 1964: President Johnson presented Robert J. Collier Trophy, for outstanding contributions to aviation, to Clarence L. Johnson of Lockheed Aircraft Corp., the designer and developer of the A-11 aircraft. Ten days earlier, on 14 Sept, he had received Presidential Medal of Freedom, highest-civilian award.

September 28, 1964: First submarine equipped with Polaris A-3 missiles, the U.S.S. *Daniel Webster*, departed Charleston, S.C.

October 7, 1964: Inauguration of Syncom III communications link from Tokyo to Point Mugu, Calif., for transmission to U.S. television stations.

October 30, 1964: Joseph A. Walker of NASA piloted first flight of the Flight Research Center's Lunar Landing Research Vehicle. Total free-flight time was less than a minute.

December 21, 1964: United States Air Force F-111A, variable-sweep wing fighter, made successful maiden flight at Carswell AFB, Tex.

December 22, 1964: President Johnson approved the inclusion of FY 66 budget of funds for development of CX-HLS (later designated C-5A), a transport which would be designed to carry 500-700 troops or some 250,000 pounds of cargo for 5,000-7,000 miles (depending on payload), without refueling at speed of approximately 550 m.p.h.

December 22, 1964: SR-71, U.S. Air Force's new strategic reconnaissance plane, in its first flight at Palmdale, Calif., exceeded an altitude of 45,000 feet and speed of 1,000 m.p.h.

1965

January 1, 1965: The U.S. Air Force's first SR-71 unit, the 4200th Strategic Reconnaissance Wing, was activated at Beale AFB, Calif.

January 16, 1965: Capt. Joe Engle, an Air Force X-15 pilot, received a silver trophy from the U.S. Junior Chamber of Commerce as one of the Nation's 10 outstanding young men.

January 18, 1965: The Short Range Attack Missile (SRAM) program was announced by the President in his defense message to Congress.

January 21, 1965: The Air Force Cambridge Research Laboratories (OAR) "bounced" a laser beam off the Explorer 22 Ionospheric Beacon Satellite and photographically recorded its reflection.

January 21, 1965: The Air Force launched an Atlas space booster from Vandenberg AFB, Calif., with a satellite to sample radiation and micrometeorites in space.

February 1, 1965: Gen. John P. McConnell became Chief of Staff of the United States Air Force.

February 1, 1965: The Air Force Western Test Range, at Vandenberg AFB, Calif., became fully operational.

February 3, 1965: SAC's Airborne Command Post completed 4 year's continuous operation.

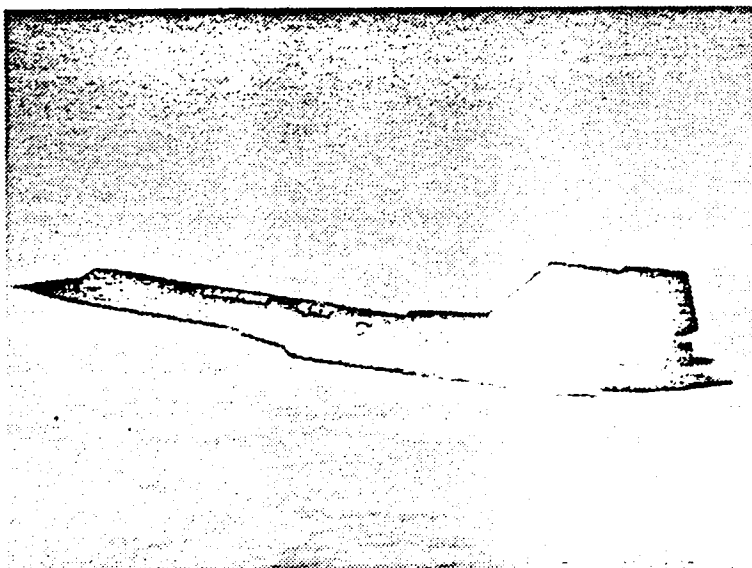
February 4, 1965: Air Force fighter pilots from ADC scored their first interception of a Bomarc drone target. It was flying at more than 1,500 miles per hour at an altitude of more than 50,000 feet.

February 8, 1965: The U.S. Air Force performed its first retaliatory air strike in North Vietnam. North American F-100 Super Sabre flew cover for attacking South Vietnamese fighter-aircraft, suppressing ground fire in the target area.

February 11, 1965: The 9th Aerospace Defense Division, an ADC unit, recorded the one-thousandth man-made space object.

February 17, 1965: The largest balloon ever sent aloft by the Air Force completed a successful flight. The Air Force recovered a 450-pound payload which had been lifted to a 142,000-foot altitude in a 26-hour flight over the western United States.

February 18, 1965: First Air Force jet raids were flown against enemy concentration in South Vietnam. American pilots flew Martin B-57 Canberra Bombers and F-100 fighters against the Viet Cong in South Vietnam, near An Khe.



March 1, 1965: The first launch of an ICBM from an operational base was made from Ellsworth AFB, S. Dak. A short-range, modified and unarmed Minuteman I missile was used.

March 5, 1965: The Air Force's F-111 completed its first supersonic flight at Fort Worth, Tex.

March 23, 1965: Gemini 3, the first two-man U.S. space capsule, was launched into orbit from the Air Force Eastern Test Range.

April 1, 1965: The Air Force tactical fighter strength reached a new high of 23 wings.

April 23, 1965: The first operational Lockheed C-141 *Starlifter* aircraft was delivered to Travis AFB, Calif.

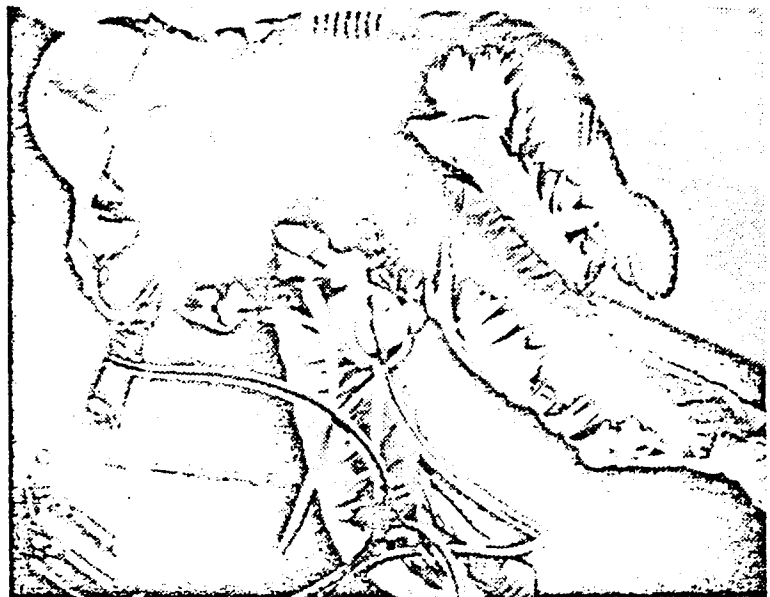
May 2, 1965: Oklahoma ANG "Talking Bird" C-97 Command Post flew to the Caribbean area to support United States forces in the Dominican Republic. Air Reserve transports airlifted 4,547 tons of cargo and 5,436 passengers supporting the U.S. Air Force mission.

May 6, 1965: The fourth Titan III-A was successfully launched from Cape Kennedy, Fla.

May 10, 1965: Tactical control of aircraft in battle areas was assigned to the Air Force by the Joint Chiefs of Staff.

June 4, 1965: Air Force space pilots Majors James A. McDivitt and Edward H. White set a U.S. space endurance record lasting 97 hours and 30 seconds in a 63-orbit trip. During the Gemini 4 mission, White took a 23-minute walk in space to become the first U.S. astronaut to accomplish this feat.

June 9, 1965: The U.S. Air Force Academy graduated a class of 517, the largest to date.



June 18, 1965: SAC B-52s were used for the first time in Vietnam, when 28 aircraft struck Viet Cong targets near Saigon.

June 18, 1965: The first Air Force Titan III-C space booster was launched.

June 21, 1965: Two Athena missiles were successfully launched in less than 3 hours from the Green River, Utah, test complex as part of the Advanced Ballistic Reentry Systems (ABRES) program.

June 29, 1965: X-15 pilot Capt. Joe Engle became the twelfth and youngest pilot to receive astronaut wings.

June 30, 1965: The ANG reported that during the past fiscal year their transports had flown more than 1,600 overwater flights outside the United States, and hauled almost 14,000 tons of cargo in support of the active Air Force.

June 30, 1965: The last of 800 Minuteman I intercontinental ballistic missiles became operational at Francis E. Warren AFB, Wyo., when SAC accepted the fifth Minuteman wing from AFSC.

July 6, 1965: The 464th Troop Carrier Wing, Pope AFB, N.C., was named recipient of the 1964 MacKay Trophy for the most meritorious flight of the year, the Congo evacuation airlift.

July 10, 1965: Scoring the first U.S. Air Force air-to-air combat victory in Southeast Asia, two F-4C aircrews of the 45th Tactical Fighter Squadron downed two Communist MIG-17 jet fighters over North Vietnam.

July 18, 1965: The first all-flying CAP encampment at Elmira, N.Y. was established to qualify cadets as airplane and glider pilots.

August 7, 1965: The first Minuteman II missile was emplaced in its silo at Grand Forks AFB, N. Dak.

August 21, 1965: The Gemini 5 spacecraft carrying Astronauts Gordon Cooper (Lieutenant Colonel, USAF) and Charles Conrad (Lieutenant Commander, USN) was launched into orbit by a Titan II booster. Splashdown occurred August 29th with a record-breaking 120 revolutions around the earth. It established five world records, including four previously established by the U.S.S.R.

August 25, 1965: The President ordered DoD to proceed with the Manned Orbiting Laboratory program which will be directed by the Air Force Systems Command.

September 17, 1965: The Air Force Systems Command was presented the Gen. Thomas D. White award for its outstanding contribution to the Nation's aerospace progress during 1964.

September 30, 1965: Secretary of Defense directed the Air Force to proceed with the development of the C-5A transport aircraft.

October 1, 1965: Dr. Harold Brown was sworn in as Secretary of the Air Force, and Norman Paul took the oath as Under Secretary of the Air Force.

October 1, 1965: The 1502d Air Transport Wing logged its 600,000th accident-free flying hour, a record in aviation history.

October 14, 1965: The delta-wing XB-70A flew at triple-sonic speed for the first time. The six-engine jet hit 2,000 miles per hour at a 70,000-foot altitude.

October 15, 1965: The Air Force graduated the first class of 16 missile combat crew members from its Minuteman Education program. The SAC missilemen received their masters degrees under a program sponsored by the Air University's Air Force Institute of Technology.

October 18, 1965: New York's Air National Guard 107th Tactical Fighter Group became the first tactical guard unit to be deployed in peacetime to the Pacific for a joint-service exercise.

October 23, 1965: The 4503d Tactical Fighter Squadron (Prov) arrived in Vietnam with 12 F-5A Freedom Fighter aircraft for combat evaluation tests.

October 31, 1965: The first 10 Minuteman II missiles were transferred to SAC. They were assigned to Wing VI, based at Grand Forks AFB, N. Dak.

November 1, 1965: Colonel Jeanne M. Holm became Director of the Women in the Air Force (WAF).

November 12, 1965: The Air Force selected eight aerospace research pilots for assignment to the Manned Orbiting Laboratory program.

December 3, 1965: The Secretary of Defense announced the Air Force will develop a reconnaissance version of the F-111, to be known as the RF-111.

December 4, 1965: Gemini 7, piloted by USAF Lt. Col. Frank Borman and co-piloted by USN Comdr. James Lovell, Jr., was launched into orbit by a Titan II booster rocket to begin the longest manned space flight in history.

December 7, 1965: An operationally-configured Minuteman II was fired by a SAC crew for the first time from an operational silo, and impacted approximately 5,000 miles down range from the point of launch at Vandenberg AFB, Calif.

December 8, 1965: Secretary of Defense announced plans to phase out the older models of the B-52 bombers and all B-58 bombers.

December 10, 1965: Secretary McNamara announced the development of a strategic and tactical bomber version of the F-111, which will be known as the FB-111.

December 18, 1965: The 14-day flight by Astronauts Lovell and Borman aboard the Gemini 7 spacecraft, and the rendezvous with Astronauts Stafford and Schirra in Gemini 6, completed the Nation's most successful space mission. Gemini 7 established 11 world records for manned space flights, including the first rendezvous of two manned maneuverable spacecraft.

1966

January 1, 1966: The Military Air Transport Service was redesignated the Military Airlift Command (MAC). The Eastern and Western Air Transport Forces were redesignated the 21st and 22d Air Forces, respectively. The Air Rescue Service became the Aerospace Rescue and Recovery Service (ARRS). The Air Photographic and Charting Service was renamed the Aerospace Audio-Visual Service (AAVS).

January 1, 1966: Military airlift units of the Air National Guard (ANG) began flying about 75 cargo flights a month to Southeast Asia. These flights were in addition to the more than 100 oversea missions a month flown by the ANG in augmenting the Military Airlift Command's global airlift mission.

January 1, 1966: A Large Rocket Facility was established at the Arnold Engineering Development Center. It will be responsible for operating two, high-altitude test cells.

January 3, 1966: The Air Force's XB-70 No. 2 flew for 3 minutes at 2,000 m.p.h. at a 70,000-foot flight level altitude over Edwards AFB, Calif.

January 7, 1966: Gemini 4 Astronaut Edward H. White (Lt. Colonel, USAF) was selected as one of the ten outstanding young men of 1965 by the U.S. Junior Chamber of Commerce.

January 22, 1966: Operation Blue Light, the largest airlift in history of troops and equipment into a combat zone, was completed. More than 4,600 tons of equipment and over 3,000 troops of the U.S. Army's 3rd Infantry Brigade, were airlifted from Hickam AFB, Hawaii, to Pleiku, South Vietnam. The operation began Dec. 27, 1965.

February 1, 1966: A 200-bed Air Force hospital became operational at Cam Ranh Bay, South Vietnam.

February 1, 1966: The Air Force's Aerospace Research Pilot School, Edwards AFB, Calif., began training six Air Force and two Navy pilots for the Manned Orbiting Laboratory program.

February 3, 1966: Strategic Air Command airborne command posts completed 5 years of around-the-clock operations.

February 4, 1966: The Department of Defense (DoD) and the National Aeronautics and Space Administration (NASA) signed a new agreement for the expeditious coordination of their manned space flight programs. The new agreement establishes a Joint NASA/DoD Manned Space Flight Policy Committee to determine top level policy concerning the Manned Space Flight Programs.

February 16, 1966: Air Force Communications Service (AFCS) traffic controllers, stationed at bases around the world, were credited with saving 139 military and civilian aircraft during 1965.

February 16, 1966: Astronaut wings were presented Col. L. Gordon Cooper, Col. Frank Borman and Lt. Col. Thomas P. Stafford by the Air Force Chief of Staff Gen. John P. McConnell.

February 24, 1966: The first Minuteman salvo launch was made from Vandenberg AFB, Calif., by a Strategic Air Command missile combat crew from the 341st Strategic Missile Wing, Malmstrom AFB, Mont.

March 4, 1966: A flight of Air Force F-4C Phantoms was attacked by three MIG-17s in the first air-to-air combat of the war over North Vietnam. The MIGs made unsuccessful passes before fleeing to the sanctuary of the Communist capital area.

March 10, 1966: The Aeronautical Chart and Information Center produced various mission charts for the Gemini 8 mission.

March 10, 1966: Air Force Maj. Bernard F. Fisher of Kuna, Idaho, a 1st Air Commando Squadron A-1E pilot, landed on the A Shau airstrip after it was overrun by North Vietnamese regulars to rescue downed A-1E pilot Maj. Dafford W. Myers, of Newport, Wash. Major Fisher was later awarded the Medal of Honor for his heroic act.



March 12, 1966: The Air University passed 20 years of service as the academic center of U.S. aerospace power. Air University has over 1.6 million alumni.

March 14, 1966: The Aeronautical Systems Division announced that \$2 million in study contracts had been awarded for advanced development of the avionics subsystem for the Advanced Manned Strategic Aircraft (AMSA). AMSA is a long-range, versatile bomber under study by the Air Force.

March 16, 1966: An Air Force Gemini Launch Vehicle (Titan II) was used by Neil Armstrong and David Scott for their Gemini 8 mission. The astronauts later accomplished the first docking maneuver in space with a Space Systems Division-developed Agena Target Vehicle launched by an Atlas booster. Air Force pararescuemen attached flotation gear to Gemini 8 space capsule in 20 minutes after splash down in the Pacific Ocean, 500 miles east of Okinawa. It was the first time Air Force rescue forces participated in the actual recovery of a Gemini capsule.

March 22, 1966: Twenty high schools were selected to start a new high school Air Force Junior Reserve Officer Training Corps Program starting in the fall.

March 22, 1966: The United Kingdom ordered 10 F-111s and components for an additional 40 aircraft.

March 28, 1966: The Air Force Special Weapons Center achieved the first successful mid-air catch of an air-launched, air-recoverable rocket nose cone over the White Sands Missile Range.

March 31, 1966: The Strategic Air Command phased out its last tactical B-47 Stratojet.

April 5, 1966: The first successful voice communication test with airplane, satellite and ground equipment was conducted in an Air Force Avionics Laboratory project. Involved were U.S. Army ground stations in Hawaii and Southeast Asia, a C-121 aircraft in Hawaii, and the SYCOM III satellite.

April 6, 1966: The Army agreed to transfer its CV-2 and CV-7 aircraft to the U.S. Air Force. The Air Force will be responsible for all future intra-theater, fixed-wing tactical aircraft. Air Force designations will be the C-7A and C-8A.

April 12, 1966: Strategic Air Command B-52 bombers struck targets in North Vietnam for the first time. They hit a supply route in the Mu Gia Pass about 85 miles north of the border.

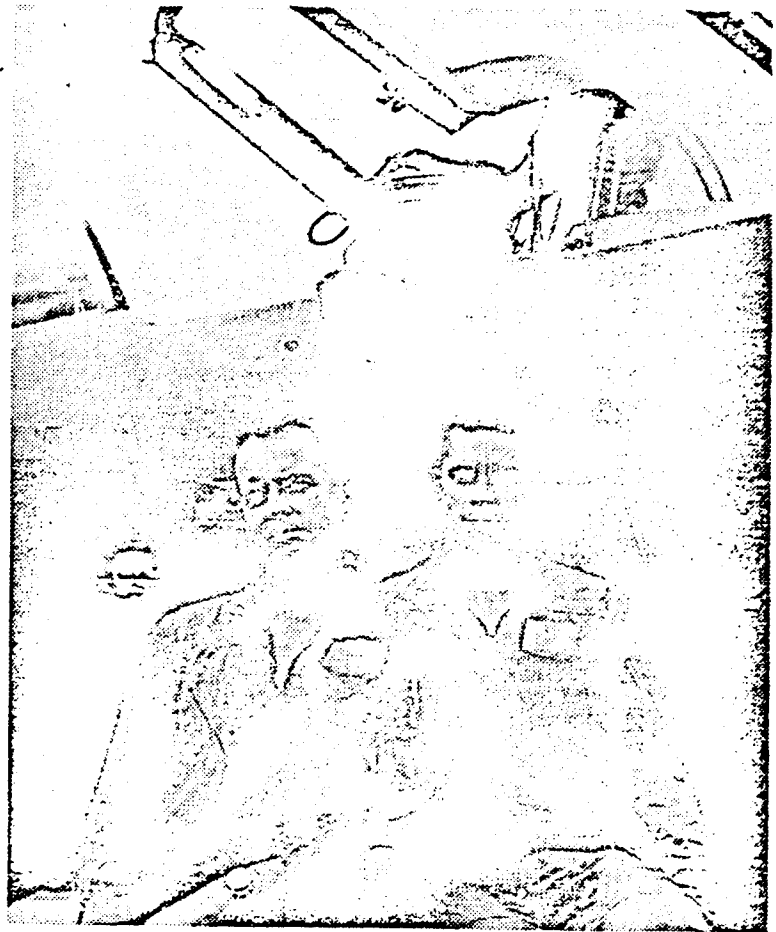
April 15, 1966: Two Air Force Reserve units, the 349th and 434th Troop Carrier Wings, were awarded the Air Force Flying Safety Award. Both organizations logged more than 100,000 hours without a major accident.

April 25, 1966: The Strategic Air Command's first Minuteman II squadron—the 447th Strategic Missile Squadron, Grand Forks AFB, N. Dak.—was declared combat ready. The squadron of 50 missiles and 5 launch control facilities was transferred to SAC by the Air Force Systems Command's Ballistic Systems Division.

April 26, 1966: The Martin Company was selected to develop a manned lifting body vehicle—a rocket plane without wings—to explore the atmospheric maneuverability of future spacecraft.

April 26, 1966: Maj. Paul J. Gilmore and 1st Lt. William T. Smith became the first Air Force pilots to destroy a MIG-21. Flying escort for F-105 Thunderchiefs near Hanoi when the flight was attacked, the F-4C pilots downed the MIG with a Sidewinder missile.

April 26, 1966: Secretary of Defense Robert S. McNamara approved a joint recommendation by the Secretaries of the Air Force and Navy to discontinue Navy participation in the Military Airlift Command.



April 30, 1966: The 7th Bombardment Wing, Carswell AFB, Tex., was awarded the Daedalian Maintenance Trophy in a presentation at Kelly AFB, Tex. The wing was the first Strategic Air Command wing to be employed in Southeast Asia operations.

May 3, 1966: Air Force Capt. Gerald T. Lyvere became the first airman to be picked up by a Lockheed HC-130H Hercules equipped with a Fulton Recovery System in a test at Rogers Dry Lake, Calif. The system can rescue downed airmen from almost any terrain in the world.

May 5, 1966: Air Force A-1E Skyraider pilots flew their first strikes against targets in North Vietnam.

May 7, 1966: Secretary of the Air Force Harold Brown announced the appointment of his predecessor, Eugene M. Zuckert, as the first Chairman of the Air Force Academy Council.

May 10, 1966: Aeronautical Chart and Information Center produced charts to support the Gemini 9 mission.

May 11, 1966: A full-scale mock-up of the Air Force C-5A, world's largest transport, was unveiled at Marietta, Ga.

May 29, 1966: The Aerospace Rescue and Recovery Service (ARRS) observed its 20th anniversary. During the 20-year period, ARRS rescued more than 12,000 people throughout the world.

June 3, 1966: NASA's Gemini 9 spacecraft with Astronauts Thomas P. Stafford (Lt. Col., USAF) as command pilot and Eugene. Cernan (Lt. Comdr., USN), pilot, was successfully launched from the Eastern Test Range by a Titan II booster. Personnel from various Air Force commands provided support for the flight. Reentry was on June 6.

June 6, 1966: Dr. Eugene T. Ferraro became the first Deputy Under Secretary of the Air Force for Manpower.

June 16, 1966: The Air Force's Titan IIIC boosted seven experimental communications satellites and one gravity gradient satellite into orbit 18,200 nautical miles above the equator. They demonstrated the feasibility of a global military communications satellite system.

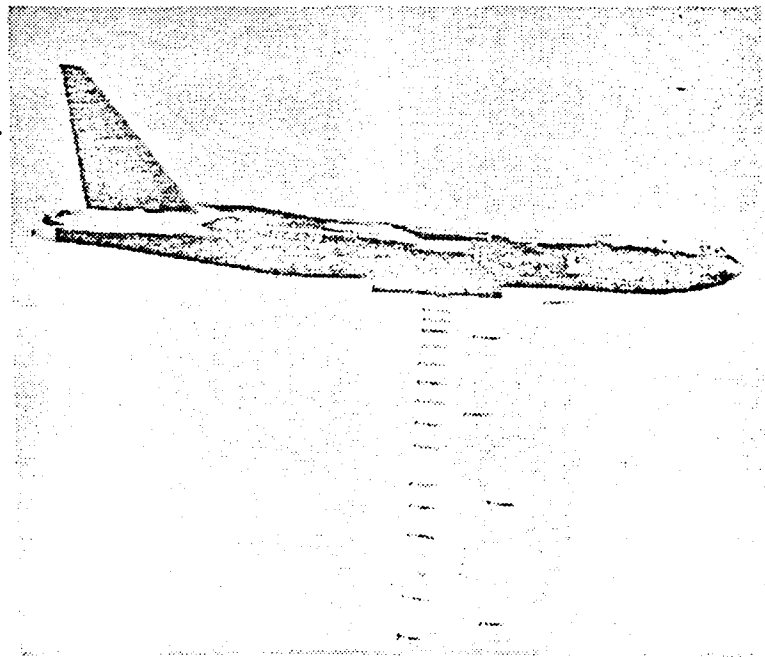
June 18, 1966: The Air Force completed 1 year of B-52 bombing activities against the Viet Cong and the North Vietnamese forces. B-52 bombers flew more than 350 conventional bombing missions, and dropped more than 70,000 tons of bombs on selected targets.

June 30, 1966: The Continental Air Command announced the greatest record of productive airlift in the history of the Air Force Reserve flying units. Air Force Reservists flew 14,234 missions, representing 83,097 flying hours, and airlifted 20,522 tons and 58,722 passengers during FY 66.

July 1, 1966: The Air Force began aeromedical evacuation flights from Saigon to the United States via Japan, reducing en route time to 24 hours.

July 1, 1966: U.S. Air Force Astronaut Lt. Col. Edward H. White II, was awarded the 1965 General Thomas D. White U.S. Air Force Space Trophy.

July 1, 1966: Activation of 14 Air Force Reserve units to assist the Air Force Logistics Command was announced by the Continental Air Command. Mission of the new Reserve maintenance squadrons (mobile) and Reserve supply squadrons (mobile support) is to augment Air Force Logistic Command operations during limited warfare and other emergency actions.



July 9, 1966: The F-111 variable-sweep wing fighter-bomber flew for the first time at Mach 2.5—about 1,800 m.p.h. Officials called the performance the highlight, to date, in the F-111 flight-test development program.

July 15, 1966: The high-speed test track at Holloman AFB, N. Mex., was extended 500 feet—increasing its length to 35,570 feet, the longest test track in the Free World.

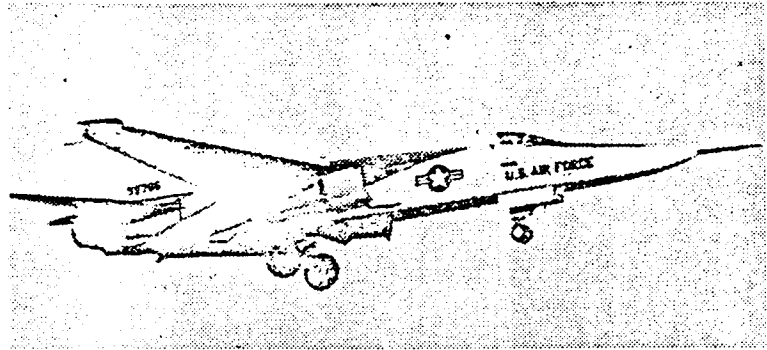
July 18, 1966: The largest balloon ever made—more than 800 feet long prior to inflation—was launched by the Air Force Cambridge Research Laboratories at its balloon launch facility at Holloman AFB, N. Mex. The huge balloon carried a 1,700-pound test payload to an altitude of 129,000 feet.

July 18, 1966: Gemini 10 was launched from the Air Force Eastern Test Range by a Titan II booster with Astronauts John Young (Comdr., USN) as command pilot and Michael Collins (Maj., USAF) as pilot. The astronauts soared to a new altitude of more than 470 miles during the mission. Splashdown occurred in the Atlantic, 540 miles southwest of Cape Kennedy, on July 21.

July 24, 1966: The Air Force Eastern Test Range celebrated its 16th year of missile and space booster firings and range support. Since the first launch of a captured German V-2 rocket on July 24, 1950, there have been 1,630 launches of a variety of missiles and space boosters from Cape Kennedy.

August 6, 1966: The Nation's first three civilian scientist-astronauts Owen K. Garriott, Edward G. Gibson and Harrison H. Schmitt received Air Force pilot wings at Williams AFB, Ariz.

August 10, 1966: Air Training Command's Officer Training School graduated its 20,000th second lieutenant.



August 25, 1966: The first class of German Air Force student pilots entered training at Sheppard AFB, Tex. The school will provide 212 pilots per year with training similar to that received by U.S. Air Force pilots.

September 1, 1966: Headquarters U.S. Air Force Tactical Airlift Center was activated at Pope AFB, N.C. The center will provide airlift support to Army units and test new airlift equipment.

September 1, 1966: The Headquarters, U.S. Air Force Tactical Fighter Weapons Center, was activated at Nellis AFB, Nev. The Center will conduct training programs for F-100, F-105 and F-4C aircrews.

September 2, 1966: Air Force, Army and Marine Corps units from the United States participated in the joint combined exercise BAR FROST with British and Norwegian forces in Norway. Tactical Air Command and Military Airlift Command airlifted U.S. Strike Command forces from the United States to Norway and back.

September 20, 1966: Lt. Col. Donald M. Sorlie became the first Air Force pilot to fly the National Aeronautics and Space Administration M2-F2 lifting body from the Air Force Flight Test Center. Air-launched from a B-52 at an altitude of 45,000 feet, the craft reached a speed of nearly 400 m.p.h. during the 3½-minute flight.

October 5, 1966: The U.S. Air Force began operating a space-age communications system developed by the Electronic Systems Division. Spanning the Mediterranean from Spain to the Near East, the system provides rapid communications between commanders in that area and the United States. It will also be used by the Army and Navy.

October 7, 1966: The Air Force selected the University of Colorado to conduct independent investigations into unidentified flying object (UFO) reports.

October 31, 1966: The Air Force announced its selection of the Boeing Co. to develop and produce the AGM-69A Short Range Attack Missile (SRAM). The missile will be carried by the FB-111 bomber and will be adaptable to late model B-52 bombers.

November 3, 1966: A single Air Force Titan IIIC rocket was launched from Cape Kennedy on a multiple mission that tested components of the military Manned Orbiting Laboratory (MOL), and boosted four satellites into orbit. The missile lifted the Gemini capsule, used for the unmanned Gemini II mission in January 1965, into a ballistic reentry trajectory. The Titan IIIC's restartable third stage placed a Titan II propellant tank and three satellites into a 160-mile orbit.

November 9, 1966: An Air Force variable-sweep wing F-111A fighter-bomber scored a first for American aircraft by flying faster than the speed of sound for 15 minutes at a constant ground clearance of less than 1,000 feet.

November 14, 1966: A Military Airlift Command C-141 Starlifter was the first jet aircraft to land in the Antarctic. Commanded by Capt. Howard Geddes, 86th Military Airlift Squadron, Travis AFB, Calif., the aircraft landed on the ice at McMurdo Sound after a 2,200-mile flight from Christchurch, N.Z.

November 15, 1966: The Hughes Aircraft Co. and North American Aviation Corp. were selected to start the contract definition phase of the MAVERICK (AGM-65A), air-to-surface missile program.

November 15, 1966: Tuy Hoa AB, the first airbase in South Vietnam designed and constructed under U.S. Air Force supervision, became operational 45 days ahead of schedule. Actual construction of the base, known as Operation Turnkey, started in August 1966.

December 21, 1966: The first SV-5D Precision Recovery Including Maneuvering Entry (PRIME) vehicle was launched by an Atlas Space Launch Vehicle from Vandenberg AFB, Calif. The program will explore and advance the development of possible manned and unmanned lifting body vehicles capable of operating like spacecraft in orbit, and maneuvering like aircraft in the atmosphere.

December 29, 1966: The Cessna Aircraft Co. was selected to produce the O-2 for use in forward air controller (FAC), liaison and observation functions.

December 31, 1966: By the end of 1966, the Aerospace Rescue and Recovery Service made 402 combat rescues in Southeast Asia and rescued 73 other personnel in the area.

December 31, 1966: Air Force Academy Cadet First Class Daniel I. Twomey, 22, of Los Angeles, Calif., received a Rhodes Scholarship for study at Oxford University, England. He is the 10th member of the Academy to receive the Rhodes Scholarship.

1967

January 1, 1967: 7th Air Force received 140 C-7A Caribou transports from the U.S. Army, thus gaining operational control of all fixed-wing cargo aircraft in Vietnam.

January 2, 1967: F-4 Phantom pilots of the 8th Tactical Fighter Wing downed seven MIG 21s over the Red River Valley, North Vietnam, to establish a 1-day aerial victory record.

January 18, 1967: A Titan IIIC booster launched from Cape Kennedy, Fla., sent eight military communication satellites into a near-perfect circular orbit.

January 19, 1967: Maj. Bernard F. Fisher was presented the Medal of Honor for his heroic rescue of a downed pilot at A Shau, Vietnam, on Mar. 10, 1966.

January 27, 1967: Three of America's Apollo astronauts, USAF Lt. Colonels Virgil Grisom and Edward H. White, and USN Lt. Comdr. Robert B. Chaffee, died in a flash fire during a preflight rehearsal at Cape Kennedy.

February 3, 1967: OAR announced construction of the world's largest solar vacuum telescope at its Sacramento Peak Observatory, Sunspot, N. Mex. The 200-ton, 328 foot telescope was designed to predict solar proton showers.

February 3, 1967: SAC's Airborne Command Post, which would direct the bomber-missile force in the event SAC's regular facilities were incapacitated, completed 6 years of around-the-clock operations.

February 6, 1967: NORAD's Space Defense Center moved into Cheyenne Mountain, Colo., completing the movement of all units into the hardened, underground facility.

February 15, 1967: The troposcatter communications link between Martlesham Heath, England, Flobecq, Belgium, and Schoenfeld, Germany became operational. Implemented by AFSC, it provides 120-voice channels and carries communications traffic previously routed through France.

February 22, 1967: Twenty-three USAF C-130s provided airlift for the first parachute personnel drop of the Vietnam War. The jump was made by the 173d Airborne Brigade in support of Operation Junction City.

February 28, 1967: Air University announced the addition of 45 high schools to the 20 already offering the Junior Reserve Officers' Training Corps program.

March 10, 1967: Air Force F-105 *Thunderchiefs* and F-4C *Phantom IIs* bombed the Thai Nguyen steel plant in North Vietnam for the first time.

March 10, 1967: Capt. Mac C. Brestel, F-105 pilot with the 355th Tactical Fighter Squadron, Takhli RTAFB, Thailand, became the first Air Force combat crewman to down two MIGs during a single mission.

March 15, 1967: The Sikorsky HH-53B, largest and fastest helicopter in the Air Force inventory made its first flight. It was slated for Aerospace Rescue and Recovery Service operations in Southeast Asia.

March 17, 1967: The first formal announcement was made by the U.S. and Thailand governments that U.S. Air Force units stationed in Thailand were flying missions against North Vietnam.

March 21, 1967: Twelve SAC aircrewman decorated by President Johnson at Andersen AFB, Guam, for B-52 bomber and KC-135 refueling missions to Vietnam.

March 30, 1967: A two-man submarine, the first Air Force-owned underwater vessel, was added to AFSC's Western Test Range inventory. It was to be used to locate reentry vehicles in the Eniwetok Atoll area.

April 3, 1967: CMSgt. Paul W. Airey became the first Chief Master Sergeant of the Air Force.

April 8, 1967: CLOVE HITCH III, a joint exercise conducted in Puerto Rico under the Atlantic Command, opened with over 21,000 Army, Navy, Air Force and National Guard personnel. This was the first time C-141s were used to airdrop paratroopers.

April 9, 1967: The 315th Air Division began the largest tactical unit move of the Vietnam War. C-130s airlifted the entire 196th Light Infantry Brigade including 3,500 troops and 4,000 tons of equipment from Tay Ninh to Chu Lai during the 5 day operation.

April 10, 1967: The first B-52 bombing mission was flown from U-Tapao AB, Thailand.

April 19, 1967: A Precision Recovery Including Maneuverable Entry (PRIME) unmanned spacecraft was launched by an Atlas booster at the Air Force Western Test Range. It successfully demonstrated maneuvering, lifting, reentry and aerial recovery techniques.

April 25, 1967: Maj. Gen. Benjamin D. Foulois (USAF Ret), America's oldest military pilot, died at Andrews AFB, Md.

April 28, 1967: An Air Force Titan IIIC booster successfully orbited five unmanned satellites. They included two Vela nuclear detection satellites and three scientific satellites.

April 29, 1967: The 1966 Daedalian Flight Safety Trophy, the Nation's outstanding air safety award, was presented to the Military Airlift Command for a record fifth time.



April 30, 1967: The Air Launched Air Recoverable Rocket (ALARR) System had its first operational test. It is designed to detect and identify nuclear tests in the atmosphere.

May 1, 1967: First two-way communications were completed from a UH-1H helicopter in Ohio to a NASA ground station in Australia via satellite relay.

May 5, 1967: The Department of Defense announced that the Air Force would train some Marine Corps Student Officers in the Undergraduate Pilot Training Program.

May 6, 1967: The 10,000th B-52 sortie, since operations began in South Vietnam on June 18, 1965, was flown.

May 13, 1967: For the second time pilots of the 8th Tactical Fighter Wing, Ubon RTAFB, Thailand, shot down seven MIGs in a single day's action over North Vietnam.

May 19, 1967: A contract to develop the Manned Orbiting Laboratory (MOL) was awarded to McDonnell Douglas Corp.

May 31, 1967: Phase out of the Atlas E, Atlas F, and Titan I intercontinental ballistic missiles was completed.

June 1, 1967: The Vietnamese Air Force officially accepted 20 F-5 aircraft, its first jets.

June 1, 1967: Alexander H. Flax, Assistant Secretary of the Air Force for Research and Development, became the first civilian to win the Gen. Thomas D. White USAF Space Trophy. He was cited for his role in the MOL program.

June 1, 1967: Two HH-3E helicopters flew nonstop from New York to Paris in 30 hours, 46 minutes and 10 seconds with nine air refuelings.

June 7, 1967: Diplomas were awarded 524 cadets in the U.S. Air Force Academy's largest graduating class.

June 9, 1967: The first O-2A Forward Air Controller aircraft arrived in Vietnam.

June 9, 1967: The Air Force began the evacuation of about 1,300 military and civilian Americans to the United States from the Middle-East because of Arab-Israeli war.

June 10, 1967: The \$52-million airbase at Tuy Hoa, Vietnam, was completed in 1 year under Project Turn Key. It was the first base to be designed and constructed completely under Air Force supervision.

June 17, 1967: The first enlisted WAF arrived in Vietnam for duty.

July 1, 1967: The Air Force Systems Command established the Space and Missile Organization (SAMSO) at Los Angeles AFS, Calif., by combining its Ballistic and Space Systems Divisions.

July 1, 1967: Civil Air Patrol National Headquarters completed its move from Ellington AFB, Tex., to Maxwell AFB, Ala.

July 1, 1967: A Titan IIIC booster launched six satellites into a circular, near-synchronous orbit. Included were three communication satellites, a scientific capsule, a gravity-measuring device and an antenna test satellite.

July 6, 1967: An Advanced Ballistic Reentry System (ABRES) vehicle was successfully launched by an Atlas D booster at Vandenberg AFB, Calif.

July 11, 1967: First public rollout of the X-24A, a manned, flatiron-shaped wingless lifting body for reentry studies, powered by a rocket engine.

July 13, 1967: Eighteen astronauts, nine Air Force, eight Navy and one Marine, received the Distinguished Flying Cross for their Mercury and Gemini space flights.

July 17, 1967: ADC's 73d Surveillance Wing, responsible for detecting and tracking objects in space, became operational at Tyndall AFB, Fla.

July 27, 1967: Three OV-1 satellites were launched into orbit by a single Atlas space booster at Vandenberg AFB, Calif.

August 10, 1967: Maj. Bernard F. Fisher received the Cheney Award, given annually for an outstanding act of valor. The award brought further recognition of his rescue of a fellow pilot in Vietnam while under enemy fire.

August 13, 1967: The Alaskan Air Command, assisted by the Alaska ANG and other Air Force units, began a 3-day rescue and support operation during a flood disaster in the Fairbanks area. Alaska-stationed Air Force Communications Service personnel provided emergency communications, and MAC provided airlift.

August 24, 1967: Air Force Tropic Survival School established and assigned to the U.S. Air Forces Southern Command.

September 9, 1967: Sgt. Duane D. Hackney was presented the Air Force Cross for bravery during the rescue of an Air Force pilot in Vietnam. He was the first living enlisted man to receive the award.



September 18, 1967: The United States Air Force celebrated its 20th anniversary as a separate military Service.

October 1, 1967: The Advanced Logistics System Center, designed to develop new logistics systems, was activated.

October 3, 1967: Maj. William J. Knight piloted the X-15 to a record 4,534 m.p.h.

October 13, 1967: President Johnson presented the 1967 Harmon International Aviation trophies to U.S. Air Force Lt. Col. Edwin A. E. Aldrin, Jr., and U.S. Navy Capt. James A. Lovell, Jr., for their 4-day Gemini 12 space flight and to Alvin S. White for his XB-70 flight series at speeds exceeding Mach 3.

October 16, 1967: The first operational F-111A supersonic tactical fighter landed at Nellis AFB, Nev. It used its terrain-following radar guidance controls for the flight from Fort Worth, Tex.

October 24, 1967: U.S. planes attacked North Vietnam's largest airbase, Phuc Yen, for the first time in a combined Air Force, Navy and Marine strike. During the attack, the Air Force downed its 69th MIG.

November 15, 1967: Maj. Michael J. Adams was killed in an X-15 crash, the first fatality since the program began in 1959.

November 17, 1967: Operation Eagle Thrust, the largest and longest airlift of troops and cargo from the U.S. to Southeast Asia, was begun by C-141 and C-133 aircraft. During the operation, 10,356 paratroopers and 5,118 tons of equipment were airlifted to the combat zone in record time.

November 21, 1967: The Hughes Trophy, given annually to the outstanding Air Force interceptor squadron, was awarded to ADC's 317th Fighter Interceptor Sq. This unit is the only one in the Air Force to win the trophy three times.

December 2, 1967: The Reserve Bill of Rights (H.R. 2) was passed. It established the Office of Air Force Reserve at Headquarters USAF, to serve as a policy planning center for Reserve operations.

December 15, 1967: Col. Robin Olds received the 1967 Kitty Hawk Memorial Award for achievement in military aviation.

December 31, 1967: A Tiros satellite was launched into orbit, the 700th major launch at Vandenberg AFB, since 1959.

1968

January 1, 1968: Reserve Forces Bill of Rights and Vitalization Act became law. The Office of Air Force Reserve (AFTOR) was established as part of the Air Staff.

January 1, 1968: Air Defense Command (ADC) established an Air Defense Weapons Center at Tyndall AFB, Fla.

January 2, 1968: Project Transition, the training program for persons separating from the Service without civilian skills, began at 182 Air Force installations.

January 2, 1968: 13th Air Force (PACAF), Clark AB, R.P., celebrated its 25th anniversary.

January 5, 1968: The Air Force Academy implemented the T-41 Light Plane Flying Program.

January 10, 1968: The world's largest X-ray machine arrived at the Air Force Systems Command's (AFSC) Air Force Special Weapons Center, Kirtland AFB, N. Mex.

January 11, 1968: The Office of Assistant Secretary of the Air Force for Manpower and Reserve Affairs was established.

January 12, 1968: The Air Force announced a system by which tactical air units will carry with them all that they need to operate at "bare" bases equipped only with runways, taxiways, parking areas, and a water supply.

January 15, 1968: Air Defense Command was redesignated Aerospace Defense Command (ADC).

January 16, 1968: United States Air Forces in Europe (USAFE) and Military Airlift Command (MAC) crews provided a 6-day airlift of food and equipment to Sicilian earthquake victims.

January 19, 1968: AFSC's Air Force Museum of Flight Medicine was dedicated at Brooks AFB, Tex.

January 21, 1968: Communists began 77-day siege of the U.S. Marine Corps stronghold at Khe Sanh, South Vietnam, which resulted in a victory for U.S. airpower over enemy ground forces.

January 26, 1968: Air National Guard (ANG) and Air Force Reserve (AFRES) elements were called to active duty because of the U.S.S. *Pueblo* incident and increased enemy activity in Vietnam.

January 28, 1968: Air Force reservists set a record by airlifting more than 447 tons of domestic cargo during the week of January 22-28, in addition to cargo carried to Southeast Asia and Europe.

January 28, 1968: The 200th Minuteman ICBM was fired from Strategic Air Command's (SAC) Vandenberg AFB, Calif.

February 1, 1968: The Medal of Honor was awarded to Maj. Merlyn H. Dethlefsen, the third member of the Air Force to receive the medal for heroism in Vietnam.

February 2, 1968: First O-2A delivered to TAC for training purposes.

February 3, 1968: At AFSC's Arnold Engineering Development Center, Tenn. a laser beam was used for the first time as a light source for photographing aircraft and missile models at high velocity.

February 6, 1968: Eleven members of the U.S. Air Force were U.S. representatives to the Winter Olympics at Grenoble, France.

February 14, 1968: Continental Air Command's (CAC) Air Force Reserve military airlift units assisted MAC moving channel traffic, while MAC participated in the rapid deployment of elements of the 82d Airborne Division and over 3,000 marines and equipment to Southeast Asia.

February 26, 1968: The first OV-10A aircraft was delivered to TAC's Air Force Special Air Warfare Center (SAWC).

February 28, 1968: Last of 284 C-141s purchased by the Air Force delivered to Tinker AFB, Okla.

February 28, 1968: Detachment 1, 37th Air Rescue and Recovery Squadron, Nakhon Panom RTAFB, picked up the 1,000th downed airman to be rescued since the unit began operations in Southeast Asia.

February 29, 1968: Aircraft attached to the United States Air Forces Southern Command (USAFSO) delivered emergency supplies to flood-stricken Bolivia.

February 29, 1968: Col. Jeanne M. Holm, WAF Director, and Col. Helen O'Day, assigned to the Office of the Air Force Chief of Staff, became the first women to be promoted to colonel under the public law which removed the restriction on the promotion of women to higher ranks in all the Armed Services.

March 1, 1968: The first Air Force medical reserve units to be stationed outside the continental United States were assigned to the Alaskan Air Command (AAC) for summer training.

March 2, 1968: The C-5 Galaxy, the Air Force's newest and largest jet transport, was rolled out at the Lockheed-Georgia Company plant, Marietta, Ga.

March 15, 1968: USAF's Inter-American Air Forces Academy celebrated its 25th anniversary. More than 8,300 students were graduated during the quarter-century period.

March 19, 1968: First class of 12 South Vietnam Air Force pilots began A-37 training at England AFB, La.

March 25, 1968: F-111s flew their first combat mission against military targets in North Vietnam.

March 25, 1968: The 944th Military Airlift Group (Associate) was activated at Norton AFB, Calif., to become the first Air Force Reserve Group to function under the new Associate Unit concept.

March 26, 1968: The 1968 Octave Chanute Award was presented to AFSC's Maj. William J. Knight for flying the X-15A-2 rocket aircraft to a new speed record of 4,534 m.p.h.

March 31, 1968: President Johnson directed a halt in U.S. bombing north of the 20th parallel in North Vietnam.

April 5, 1968: Ten scientist-astronauts of the National Aeronautics and Space Administration (NASA) began undergraduate pilot training at five Air Training Command (ATC) bases.

April 28, 1968: USAF's C-130 crews airlifted approximately 92,000 pounds of food to La Toma, Ecuador, a drought-stricken area, over a 3-day period.

May 1, 1968: ANG tactical refueling units completed 1 year overseas duty on a continuous basis without mobilization. This was the first operation of its type in Guard/Reserve history.

May 3, 1968: The first ANG unit called to active duty, the 120th Tactical Fighter Squadron, arrived in South Vietnam and began flying combat missions 2 days later.

May 3, 1968: OAR's Air Force Cambridge Research Laboratories (AFCLR) reported development of a new electrochemical cell for direct conversion of light and other radiant energy into electrical energy.

May 4, 1968: Gen. Carl A. Spaatz (USAF Ret.) was presented the Thomas D. White National Defense Award for 1968.

May 1968-July 1968

May 9, 1968: The American Helicopter Society presented Federation Aeronautique Internationale Certificates to two Air Force pilots for their May 1967 record nonstop transatlantic flights from New York to Paris in Sikorsky HH-3E helicopters.

May 10, 1968: Defense elements in Japan were tied into the worldwide DoD Automatic Digital Network with the activation of the AFCS-operated automatic electronic switching center at Camp Drake, Japan.

May 12, 1968: SAC's Bunker Hill AFB, near Peru, Ind., was renamed Grissom AFB, in honor of Astronaut Virgil Grissom, who died in the Jan. 27, 1967, Apollo capsule fire.

May 13, 1968: Three additional units of the ANG and six from the Air Force Reserve were called to extended active duty to augment regular Air Force units.

May 14, 1968: Dedicating the Pentagon's Hall of Heroes, President Johnson awarded the Medal of Honor to a member of each of the four military services, including Air Force Capt. Gerald O. Young.

May 16, 1968: The Air Force airlifted 88.5 tons of food and relief material to Ethiopia in response to a flood emergency.

May 28, 1968: The first A-37B attack aircraft rolled out of the Cessna Aircraft Plant at Wichita, Kans.

May 28, 1968: Thirty-six C-141s, three C-130s, and crews of the 21st and 22d Air Forces were used in the largest C-141 combat airdrop formation in MAC history during exercise Cold Mass 11.

May 31, 1968: AAC radar stations began the first radar weather transmissions from Alaska to the U.S. Weather Bureau.

June 4, 1968: The VX-4B Hummingbird 11 VTOL aircraft was rolled out of the Lockheed Aircraft Plant at Marietta, Ga.

June 5, 1968: OAR scientists at AFCRL, L. G. Hanscom Field, Mass., announced development of a new short-range collision-avoidance radar.

June 12, 1968: Capt. Charles H. Radoy, a graduate of AU's School of Engineering, became the first recipient of the Gen. Curtis E. LeMay Lamplighter Award given for outstanding scientific research.

June 13, 1968: A Titan IIIC launch vehicle successfully orbited eight communications satellites from Cape Kennedy, Fla., augmenting the Initial Defense Satellite Communications System.

June 17, 1968: First C-9 aeromedical evacuation aircraft ordered by MAC for airlift of patients within the United States was rolled out at McDonnell-Douglas Corp., Long Beach, Calif.

June 18, 1968: SAC B-52 bombers marked 3 years of operations in Vietnam. During this period, more than 25,000 sorties were flown and more than 630,000 tons of conventional bombs were dropped.

June 19, 1968: A "fast-fix" cement for helicopter landing sites was developed by AFSC's Aero Propulsion Laboratory, Wright Patterson AFB, Ohio, and tested in Southeast Asia. The cement hardens in only 30 minutes.

June 21, 1968: The first group of U.S. Marine Corps pilots to be trained by the Air Force received their pilot wings at Laredo AFB, Tex., and Vance AFB, Okla.

June 24, 1968: The Allied Officer Familiarization Course Class 68-C began with 70 foreign students, the largest enrollment in the history of Air University's Allied Officer Program.

June 30, 1968: The Puerto Rico Air National Guard conducted a training course in air defense tactics for members of the Venezuelan Air Force, the first time that ANG members have trained forces from Latin America.

June 30, 1968: The Lockheed C-5 Galaxy, the world's largest aircraft, made its first flight.

June 30, 1968: During the first 6 months of 1968, AFCS air traffic controllers were credited with saving 132 aircraft worth over \$150 million.

July 1, 1968: The first WAF in the Air National Guard was sworn in as a result of passage of Public Law 90-130, which allows ANG to enlist women.

July 1, 1968: On a voluntary basis, 32 ANG F-102 pilots began active duty filling critical vacancies throughout the world, including Vietnam.

July 1, 1968: One of the Nation's oldest military air facilities, the USAF Headquarters Command's Bolling AFB, D.C., celebrated its 50th anniversary.

July 7, 1968: ATC celebrated its 25th anniversary.

July 8, 1968: AFSC's Air Force Human Resources Laboratory was activated at Brooks AFB, Tex., for research and development activities in human resources, education, training, and management fields.

July 11, 1968: Two OAR satellites, OVI-15 and OVI-16, were placed in orbit to measure density and density variations at low satellite altitudes.

July 20, 1968: Exercise Guard Strike II, begun on this date, was the largest joint Army and Air National Guard field training exercise ever staged within the continental United States.

July 31, 1968: Two UH-1F helicopters from USAFSO helped the Costa Rican government evacuate people endangered by the eruption of the Mount Arenal volcano.

August 1, 1968: Gen. John D. Ryan became Air Force Vice Chief of Staff, succeeding Gen. Bruce K. Holloway, who assumed command of SAC.

August 1, 1968: Continental Air Command (CAC) was discontinued and Headquarters Air Force Reserve (AFRES) was established at Robins AFB, Ga. The Air Reserve Personnel Center at Denver, Colo., was established as a separate operating agency. The Civil Air Patrol (CAP) was assigned to Headquarters Command, USAF.

August 1, 1968: USAFSO flew 13,000 pounds of disaster relief supplies to San Jose, Costa Rica, to aid the victims in the Arenal volcano eruption.

August 1, 1968: Gen. John P. McConnell, Air Force Chief of Staff, was reappointed for a 1 year period effective Aug. 1, 1968, and Chief Master Sergeant of the Air Force Paul W. Airey had his assignment extended until July 31, 1969.

August 13, 1968: The National Guard Technician Act of 1968 became a public law, placing full-time Air and Army Guard technicians under Federal Civil Service Retirement.

August 16, 1968: The first Minuteman III missile was successfully launched from Cape Kennedy, Fla.

August 21, 1968: An estimated 260 people were evacuated and 52,000 pounds of food and personal belongings were airlifted by an Air Force UH-1F helicopter during a 4-day period aiding flood victims in northeastern Nicaragua.

August 25, 1968: The North American OV-10 Bronco, the Air Force's newest forward-air-controller aircraft, began a 90-day combat evaluation program in South Vietnam.

September 11, 1968: OAR scientists launched a 28.7-million-cubic-foot balloon with a U.S. Army payload from the White Sands Missile Range, N. Mex., to an altitude of 158,000 feet, establishing two records. The balloon was the largest ever launched, and the altitude was the highest ever attained by a balloon.

September 24, 1968: The Air Force Titan IIIC orbited four scientific satellites.

September 28, 1968: The XV-4B Hummingbird II, a VTOL (vertical takeoff and landing) research aircraft, made its first flight.

October 1, 1968: AFCS "saves" since activation of the command on July 1, 1961, passed \$1 billion in aircraft and 2,800 in lives.

October 1, 1968: MAC moved 33,043 passengers and 3,796 tons of cargo during Reforger/Crested Cap, a 4-month airlift of military personnel, dependents, and equipment from Germany to the United States.

October 11, 1968: Air Force units supported the first manned space mission in NASA's Apollo project when three astronauts were launched in the Apollo 7 capsule into an 11-day earth orbit from Cape Kennedy, Fla.

October 12, 1968: The United States had 12 representatives from the U.S. Air Force on the Olympic teams at the Mexico City summer event.

October 25, 1968: AFLC's Technical Library at Wright-Patterson AFB, Ohio celebrated its golden anniversary.

October 30, 1968: The Cheney Award was presented to MAC pararescueman Sgt. Duane D. Hackney, for gallantry in action in Vietnam.

October 30, 1968: First annual presentation of the Gen. Thomas P. Gerrity Logistics Award was made to the 2705th Air Munitions Wing, at AFLC's Hill AFB, Utah.

November 1, 1968: SAC's 15th Air Force observed its 25th anniversary.

November 1, 1968: President Johnson halted all bombing of North Vietnam.

November 8, 1968: TAC received its first AC-119K, the latest in a series of multi-weapon attack aircraft.

November 22, 1968: The 64th Fighter Interceptor Squadron, Clark AB, R.P., received the Hughes Trophy, given annually to the best air defense fighter squadron in the U.S. Air Force.

December 3, 1968: Maj. William J. Knight received the 1968 Harmon International Aviator's trophy for flights in the X-15A-2. One flight exceeded 4,500 m.p.h., and another took him to an altitude above the 50-mile mark.

December 12, 1968: Air Force Reserve and Air National Guard units called to active duty in January and May began deactivation.

December 21, 1968: NASA's Apollo 8, with three astronauts aboard, began 7-day mission from Cape Kennedy, Fla., with various Air Force units supporting the mission. The astronauts, including two Air Force officers, achieved man's first circumlunar space travel and orbited the moon.

1969

January 1, 1969: The first AC-119 gunship combat mission in Vietnam was flown by the Air Force Reserve's 71st Special Operations Squadron.

January 6, 1969: The Air Force Data Systems Design Center announced that the Air Force Mobile Supply Computer (UNIVAC 1050) was flown to the Philippines for support of Air Force operations in Southeast Asia. The computer was designed to be transportable for use at Air Force operational sites throughout the world.

January 12, 1969: Exercise Reforger/Crested Cap began with U.S. Air Forces in Europe dual-based F-4Ds and Military Airlift Command troop transports participating in a combined Air Force-Army operation in response to NATO commitments.

January 15, 1969: Dr. Robert C. Seamans, Jr., became Secretary of the Air Force, replacing Dr. Harold Brown.

January 15, 1969: The first improved Backup Interceptor Control (BUIC III) began operation at Ft. Fisher AFS, N.C.

January 16, 1969: Lt. Col. Joe M. Jackson was awarded the Medal of Honor for heroic action at Kham Duc, Republic of Vietnam, on May 12, 1968.

January 20, 1969: Units from Headquarters Command USAF stationed at Andrews AFB, Md., and Bolling AFB, D.C., participated in ceremonial and support activities for the Presidential Inauguration.

February 1, 1969: Air Force Reserve tactical airlift units paraded a record 6,182 troops during training operations at Fort Benning, Ga.

February 4, 1969: The XB-70 research aircraft was flown to Wright-Patterson AFB, Ohio, to become part of the Air Force Museum's exhibit of outstanding and historic aircraft.

February 9, 1969: The free world's largest experimental communications satellite, the 1,600-pound TACSAT 1, was boosted into a geostationary orbit from the Air Force Eastern Test Range, Fla., by a Titan IIIC launch vehicle.

February 27, 1969: The Aerobics physical fitness program developed by Lt. Col. Kenneth H. Cooper, of Air Force Systems Command's Aerospace Medical Laboratory, was adopted by the Air Force to replace the SBX program.

March 7, 1969: Air University announced that four AF-ROTC Schools—Ohio State, Auburn, Drake, and East Carolina University—were selected to offer the WAF commissioning program.

March 9, 1969: Air Force Military Airlift Command, Tactical Air Command, U.S. Strike Command, and Air Force Communications Service units began Exercise Focus Retina. Approximately 2,500 assault troops and supporting equipment were flown to Korea.

March 18, 1969: Three satellites, containing 17 experiments, in the Orbiting Vehicle Program were launched from Vandenberg AFB, Calif., under the direction of Office of Aerospace Research scientists, to conduct basic environmental research in near-earth orbits.

April 11, 1969: The first Minuteman III ICBM launch from Vandenberg AFB, Calif., was accomplished by a SAC combat missile crew under the direction of technicians from the Air Force Systems Command.

April 17, 1969: The first free flight of the X-24 lifting body was completed at the Air Force Flight Test Center, Edwards AFB, Calif., with Maj. Jerauld R. Gentry at the controls.

April 21, 1969: Secretary of the Air Force Robert C. Seamans, Jr., and NASA Administrator Thomas O. Paine signed an agreement toward establishing a joint civilian-military manned space station.

April 25, 1969: Air Force announced that the Strategic Air Command will disperse its bomber and tanker aircraft to improve the survivability of the SAC alert forces.

May 9, 1969: More than 150 Air Force Reserve aircraft from 25 units participated in Exercise Exotic Dancer II held in Puerto Rico. This operation involved more than 349 missions, carrying 1,224 tons of cargo, and airlifting 1,267 personnel.

May 14, 1969: United States Air Forces Southern Command personnel began a massive U.S. Air Force/State Department/Public Health Service campaign to combat encephalitis epidemic in Ecuador.

May 23, 1969: The final Titan IIIC research and development test launch orbited two Vela nuclear detection satellites from Cape Kennedy, Fla. Three satellites in the Office of Aerospace Research Orbiting Vehicle Program to obtain environmental data in deep space were also aboard the Titan IIIC.

June 4, 1969: The Thunderbirds, Air Force's Air Demonstration Squadron, held their first show using the F-4 Phantom aircraft.

June 7, 1969: Air Training Command personnel at Sheppard AFB, Tex., celebrated the 25th anniversary of helicopter training in the U.S. Air Force.

June 10, 1969: Air Force Systems Command presented the number one X-15 rocket-powered, manned-research aircraft to the Smithsonian Institution, Washington, D.C., for display with other historic aircraft.

June 10, 1969: Secretary of Defense Melvin Laird announced cancellation of the Air Force's Manned Orbiting Laboratory (MOL).

June 19, 1969: Air University's Extension Course Institute enrolled its five-millionth student.

June 20, 1969: The 1968 Koren Kolligian, Jr., Trophy was presented to Maj. LeRoy R. Mulch for demonstrating "outstanding airmanship" during a KC-135 Stratotanker emergency.

June 23, 1969: The largest class in the history of the United States Air Force Academy—1,402 cadets—entered as the class of 1973.

June 28, 1969: North American Air Defense Command's Space Defense Center, located in the Cheyenne Mountain complex, Colorado Springs, Colo., logged the 4,000th manmade object in space.

June 30, 1969: Air Force Communications Service announced that the Automatic Voice Network (AUTOVON) began worldwide operations with the activation of five multimillion dollar high-speed communications switching centers in Europe and the Panama Canal Zone.

July 1, 1969: Aerospace Rescue and Recovery Forces in Southeast Asia completed their 2,500th "save" when they evacuated three wounded men from the Mekong Delta.

July 1, 1969: Air Force service numbers were replaced by Social Security account numbers for all military personnel.

July 8, 1969: The first of 25,000 troops withdrawn from Southeast Asia under the Administration's policy were airlifted aboard C-141s from Vietnam to McChord AFB, Wash.

July 16, 1969: The Apollo 11 launch, first manned lunar landing mission, was supported by Air Force personnel worldwide.

July 17, 1969: Alaskan Air Command assumed responsibility for resupplying T-3 (Fletcher's Ice Island) with food, fuel, equipment, and supplies. T-3 is a floating, 20-square mile island used for weather and other scientific research.

July 19, 1969: USAFSO personnel and aircraft airlifted emergency supplies as part of its role in a seven-nation team helping to mediate ceasefire in Honduras-El Salvador conflict.

July 20, 1969: Air Force Col. Edwin E. Aldrin, Jr., became the second man to set foot on the moon.

July 24, 1969: Air Force Col. Michael Collins, Apollo 11 command module pilot, established a new world record of 59 hours, 27 minutes, and 55 seconds in lunar orbit.

July 29, 1969: Air Force Missile Development Center, Holloman AFB, N. Mex., directed the first launch of the Short Range Attack Missile (SRAM).

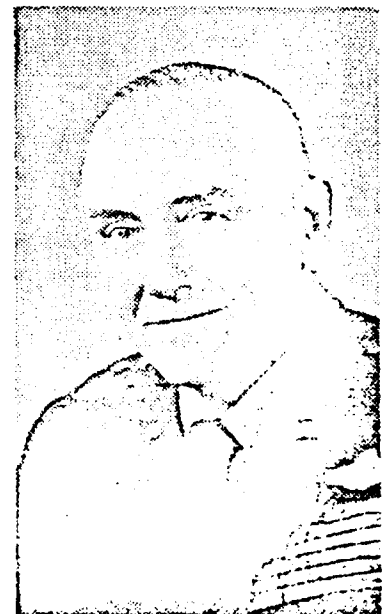
July 31, 1969: Infrared spectrophotometers and detectors developed under Office of Aerospace Research direction were used on the Mariner space probes to determine surface temperature and atmosphere composition of Mars.

August 1, 1969: Gen. John D. Ryan was appointed Air Force Chief of Staff following Gen. John P. McConnell's retirement.

August 1, 1969: CMSgt. Donald L. Harlow became Chief Master Sergeant of the Air Force.

August 1, 1969: Quicktape, using broadcast tapes recorded in the air from a ground radio-man and rebroadcast directly through the plane's loudspeaker, was added to the psychological warfare program by Air Force units in Southeast Asia.

August 25, 1969: Military Airlift Command crews completed the first aerial refueling of the C-5 Galaxy jet cargo transport.



August 25, 1969: Nine U.S. scientist-astronauts attending USAFSO-operated U.S. Air Force Tropic Survival School at Albrook AFB, C.A., brought to 62 the number of astronauts who have received training at the school.

September 2, 1969: Scientists at the Air Force Cambridge Research Laboratories' Lunar Laser Observatory bounced a laser signal off the retroreflector placed on the moon by Apollo 11 astronauts.

September 5, 1969: The Harmon International Aviator's Trophy was awarded to Maj. Jerauld R. Gentry, X-24 lifting body vehicle pilot.

September 24, 1969: The National Security Agency Travis Trophy, awarded annually to the military organization which makes the most significant contribution in the fields of operation, management, and administration, was awarded to the United States Air Force Security Service.

October 8, 1969: Helicopter crews from the 58th Aerospace Rescue and Recovery Squadron, Wheelus AB, Libya, saved the lives of more than 2,500 Tunisians during a 6-day rescue mission, and airlifted food, water, clothing, and medicine to the flood-stricken area.

October 15, 1969: The Air Force Cambridge Research Laboratories' solar vacuum telescope, considered one of the finest solar observing instruments in the world, became operational.

October 18, 1969: Air University's Air Force Institute of Technology celebrated its 50th anniversary.

October 29, 1969: The Strategic Air Command announced the phaseout of all B-58 Hustler strategic bombers from the Air Force inventory.

November 3, 1969: The Air Force issued Requests for Proposals on the B-1 strategic aircraft to airframe and engine manufacturers.

November 6, 1969: A 34-million-cubic-foot balloon, twice as tall as the Washington Monument and the largest balloon ever launched, lifted a 13,800-pound instrument payload over Holloman AFB, N. Mex.

November 14, 1969: Air Force personnel at locations throughout the world supported the Apollo 12 launch and later recovery operations.

November 21, 1969: A Thor-Delta rocket boosted a United Kingdom SKYNET communications satellite into orbit. The satellite was developed by Air Force's Space and Missile Systems Organization for the British Government.

November 30, 1969: The USAF Academy Cadet Parachute Team won the National Intercollegiate Parachute Championship at Phoenix, Ariz., for the second consecutive year.

December 5, 1969: The Hughes Trophy, an annual award to the top fighter interceptor squadron, was presented to the Aerospace Defense Command's 71st Fighter Interceptor Squadron, Malmstrom AFB, Mont.

December 16, 1969: Air National Guard and Air Force Reservists representing units mobilized in 1968 were honored by the President during Reserve Recognition Day ceremonies at the White House.

December 17, 1969: The Air Force concluded the Unidentified Flying Object (UFO) reporting and investigating project.

December 17, 1969: Air Force Systems Command presented the first C-5 Galaxy to the Military Airlift Command for operational use.

December 18, 1969: Air Force Missile Development Center crews completed the first guided launch of the Maverick (AGM-65) missile.

December 20, 1969: USAF Academy Senior Cadets Scott S. Barker and George R. Keys, Jr., became the 12th and 13th members of the academy to receive Rhodes Scholarships.

December 23, 1969: The McDonnell Douglas Corp., St. Louis, Mo., was named prime contractor for the Air Force's F-15 air superiority fighter.

December 31, 1969: Air Force Communications Service air controllers were credited with saving 91 aircraft involving 977 people during 1969. Estimated value of the aircraft saved was more than \$125 million.

December 31, 1969: The Air Force Reserve completed an accident-free flying year, while flying over 150,000 hours in eight different types of aircraft.

1970

January 5, 1970: Aerospace Defense Command's Back-Up Intercept Control (BUIC) III radar system became fully operational with the acceptance of the facility at the 80th Air Defense Group, Fortuna AFS, N. Dak.

January 7, 1970: The Vice Chief of Staff charged commanders with new leadership responsibilities for the 1970s with emphasis on the importance of young people in the Air Force.

January 10, 1970: Air Force Systems Command engineers at Kirtland AFB, N. Mex., tested a small, portable, water treatment plant capable of producing 4,000 gallon of drinking water a day from sewage.

January 17, 1970: Reserve aircrews airlifted carpenters and painters to New Orleans to help in repairing damage caused by Hurricane Camille.

January 27, 1970: The first increment of a 64-man Air Training Command Mobile Training Team was deployed to Vietnam to assist in the establishment of 17 basic maintenance training courses. These courses form the foundation of training to support further expansion of the Vietnamese Air Force capabilities.

January 30, 1970: Operational control of the first SKY-NET Communications Satellite was turned over to the United Kingdom after launch and orbit insertion on Jan. 8 by Air Force Systems Command's Space and Missile Systems Organization.

February 3, 1970: U.S. Air Force rescue crews from the 36th Aerospace Rescue and Recovery Squadron, Yokota AB, Japan, began rescue of 44 of 59 seamen involved in two ship sinkings in the North Pacific—the Liberian freighter *Antonious Demades* and the Japanese freighter *California Maru*.

February 27, 1970: First F-111E arrived at the Air Force Flight Test Center, Edwards AFB, Calif., for flight testing.

February 27, 1970: Pratt & Whitney Aircraft, United Aircraft Corp., West Palm Beach, Fla., was selected for development and production of engines for the Air Force F-15 and Navy F-14B aircraft.

March 1, 1970: Construction of the new Air Force Museum building started at Wright-Patterson AFB, Ohio.

March 6, 1970: Secretary of Defense Melvin Laird announced the merger of the Air Force Communications Service and the Ground Electronics Engineering Installation Agency (GEEIA) effective Apr. 1, 1970.

March 12, 1970: Vice President Spiro T. Agnew presented Harmon International Aviation Trophies for 1969 to Maj. Jerould R. Gentry (Aviator Category), test pilot at the Air Force Flight Test Center, Edwards AFB, Calif., and to Col. Frank Borman and Lt. Col. William A. Anders (Astronaut Category), Air Force Apollo 8 crewmembers.

March 15, 1970: The overseas portion of the worldwide Automatic Voice Network (AUTOVON) was completed, making it possible to call any U.S. military installation in the world without leaving your desk.

March 19, 1970: The X-24 lifting body successfully completed its first powered flight over Edwards AFB, Calif. It was piloted by Maj. Jerould R. Gentry, a test pilot at the Air Force Flight Test Center.

March 20, 1970: The first of two communications satellites for the North Atlantic Treaty Organization was launched from the Air Force Eastern Test Range, Cape Kennedy AFS, Fla., on a Thor-Delta booster.

March 24, 1970: The President mobilized certain Air Force Reserve and Air National Guard units to support the U.S. Post Office Department during a strike by postal employees.

March 24, 1970: First launching of the BOMARC "B" guided missile, using the new Back-Up Interceptor Control (BUIC) III computerized command and control equipment, was completed at Tyndall AFB, Fla.

March 30, 1970: United States Air Forces in Europe dispatched medical teams and support personnel from units in Turkey to provide medical aid and other humanitarian services to thousands of earthquake victims of Gediz, Turkey, and surrounding villages.

March 31, 1970: Phase out of the last of the CGM-13B (MACE) missiles was completed. The missiles are stored at the Military Aircraft Storage and Disposition Center, Davis-Monthan AFB, Ariz., for possible use as subsonic target drones.

April 1, 1970: Command and control of all U.S. strategic missiles was consolidated under Strategic Air Command's 15th Air Force.

April 1, 1970: The Strategic Air Command Post Attack Command Control System was reorganized and relocated to inland operating bases at Offutt AFB, Nebr.; Grissom AFB, Ind.; and Ellsworth AFB, N. Dak.

April 1, 1970: Maj. Jerould P. Gentry, Air Force Systems Command, was awarded the Octave Chanute Award for outstanding achievements as Air Force lifting body project officer.

April 1, 1970: Air Force Systems Command combined the Air Force Western Test Range, Vandenberg AFB, Calif., and two aerospace test wings to form the Space and Missile Test Center under the Space and Missile Systems Organization (SAMSO).

April 8, 1970: Air Force's Thor booster launched its 400th space load; this time a Nimbus weather satellite for National Aeronautics and Space Administration.

April 10, 1970: Air University's Aerospace Studies Institute announced the publication of the first Astronautical Multilingual Dictionary.

April 10, 1970: Air Training Command completed shipment of 872 trainers under Project Pacer Bravo in support of the Vietnamese Air Force Improvement and Modernization Program.

April 11, 1970: Tactical Air Command gained its first Air National Guard tactical airlift unit when the 146th Tactical Airlift Wing, California Air National Guard, was formally reorganized.

April 11, 1970: Personnel and aircraft from the United States Air Force Southern Command began assistance program for victims of floods in Costa Rica and Panama that killed 38 and left thousands homeless.

April 14, 1970: The first airlift of an operational Minuteman III missile was accomplished by a C-141 aircraft from Hill AFB, Utah. The missile was airlifted from Hill to Minot AFB, N. Dak.

April 25, 1970: The 175th Tactical Fighter Group, Baltimore, Md., received A-37 aircraft—first in the Air National Guard.

April 29, 1970: The Apollo 11 crew (Neil A. Armstrong, Colonels Edwin E. Aldrin and Michael Collins) was awarded the Gen. Thomas D. White Trophy for the outstanding scientific and technological accomplishment in achieving the first landing of man on the surface of the moon.

May 4, 1970: A SAC task force of four B-52s won the Blue Steel trophy for best results in combined bombing and navigation during the Royal Air Force Strike Command Bombing and Navigation competition at RAF Station Marham, England.

May 5, 1970: Sister Nancy Ann Eagan became first Catholic nun to enter the Air Force Reserve when she was commissioned a first lieutenant. Sister Nancy, a nurse at St. Joseph's Hospital in Kirkwood, Mo., is assigned to the 932d Aeromedical Airlift Group (Associate), Scott AFB, Ill.

May 5, 1970: Air Force Reserve Officers' Training Corps expanded to include coeds after test programs at Drake, Ohio State, East Carolina, and Auburn Universities proved successful.

May 6, 1970: The Apollo 11 crew (Neil A. Armstrong, Colonels Edwin E. Aldrin and Michael Collins) was awarded the Collier Trophy for outstanding scientific and technological accomplishment in achieving the first landing of man on the surface of the moon.

May 14, 1970: A radar receiver capable of tracking stars and other celestial objects 10 times more accurately than before, was announced by an electronic engineer at Air Force Systems Command's Rome Air Development Center, Griffis AFB, N.Y.

May 15, 1970: Capt. James P. Fleming was awarded the Medal of Honor for heroic action near Duc Co, Republic of Vietnam, on Nov. 26, 1968.

May 15, 1970: Sgt. John L. Levitow was awarded the Medal of Honor for heroic action over Long Binh Army Post, Republic of Vietnam, on Feb. 24, 1969. Sergeant Levitow is the first Air Force enlisted recipient of the Medal of Honor since World War II.

May 19, 1970: A new, smogless gas turbine generator, producing 9,000 kilowatts of electricity, was placed into operation at the Air Force Satellite Test Center (AFSC), Sunnyvale, Calif.

May 19, 1970: The Apollo 11 crew (Neil A. Armstrong, Colonels Edwin E. Aldrin and Michael Collins) was awarded the Harmon Trophy (Astronaut Category) for the outstanding scientific and technological accomplishment in achieving the first landing of man on the surface of the moon.

May 28, 1970: Air Force Academy wins the Gen. Thomas D. White Conservation of Natural Resources Award for the second time. The award was previously won by the Academy in 1962.

June 2, 1970: United States Air Forces Southern Command personnel and aircraft from Howard and Albrook AFBs, Canal Zone, and C-130s from Lockbourne AFB, Ohio, began massive disaster relief operation for victims of devastating earthquake in Peru that killed 70,000 and left 800,000 homeless. In 31 days, USAFSO airlifted 1.5 million pounds of supplies and equipment, 2,827 passengers, and made 501 medical evacuations, while operating under practically bare base condition 1,500 miles from their home base.

June 2, 1970: The Civil Air Patrol (CAP) and Federal Aviation Administration signed a "Memorandum of Understanding" outlining and defining the part CAP would play in emergency airlift should the United States ever come under enemy attack.

June 5, 1970: North American Rockwell (airframe) and General Electric (engines) contracts were signed for engineering development of the B-1—the proposed follow-on weapons system to replace the B-52 aircraft.

June 6, 1970: Gen. Jack J. Catton, Commander, Military Airlift Command, accepted delivery of the first C-5 for operational use in the Air Force.

June 18, 1970: The 58th Aerospace Rescue and Recovery Squadron was awarded the 1970 Capt. William J. Kossler Award from the American Helicopter Society for saving more than 2,500 lives during Tunisian floods in 1969.

June 19, 1970: The first flight of Minuteman III missiles became operational at Minot AFB, N. Dak.

June 22, 1970: PRIME BEEF team from Chanute AFB, Ill., restored the water system to Crescent City, Ill., following explosions and fire which wiped out the business district. The disaster resulted from the derailment of freight cars loaded with L-P gas.

June 27, 1970: The Aerospace Defense Command marked its 20th anniversary of continuous 24-hour alert.

June 29, 1970: The largest class in the history of the U.S. Air Force Academy—1,400—entered as the class of 1974.

June 30, 1970: Air Force Reserve support of Military Airlift Command's Southeast Asia requirements during fiscal year 1970 totaled 419 missions. Over 4,900 tons of cargo were airlifted to destinations in the Far East.

July 1, 1970: The Air Force Office of Aerospace Research (OAR) merged into the Air Force Systems Command (AFSC) giving the latter responsibility for all Air Force Research and Development. The merger involved nearly 2,000 OAR scientists and technical experts, who joined the more than 55,000 personnel of AFSC.

July 5, 1970: The first contract for the new Airborne Warning and Control System (AWACS) aircraft was let to Boeing Co. The AWACS fleet will serve as airborne combat direction centers for Aerospace Defense Command.

July 14, 1970: The C-5 Galaxy completed its first transpacific flight of 21,500 miles, inaugurating service to Hickam AFB, Hawaii; Andersen AFB, Guam; Clark AB, R.P.; and Kadena AB, Okinawa.

July 14, 1970: The Air Force began turnover of the \$28.4 million Alaska Communications System to private civilian control, the Matanuska Telephone Association.

July 20, 1970: Electronics Systems Division, L. G. Hanscom Field, Mass., turned over to the Air Force Communications Service the recently completed photo relay system known as "Compass Link." Using three ground stations and two satellites, Compass Link can transmit exposed film from Southeast Asia to the Pentagon, using electronic signals and laser beams.

July 29, 1970: Col. Vere Short, a C-141 pilot, attained 25,000 hours of accident-free flying, the most military flying time by anyone on active duty.

July 31, 1970: The first class of foreign students under the President's Vietnamization Program completed the Undergraduate Pilot Training course at Keesler AFB, Miss.

August 3, 1970: Military Affiliate Radio Systems (MARS) stations, manned by personnel of the Air Force Communications Service, were the prime source of relief information and assistance after Hurricane Celia struck the Gulf Coast.

August 4, 1970: Aircrews of the Air Force Reserve airlifted 73 mentally and physically handicapped children from Corpus Christi, Tex., to Austin, Tex., after Hurricane Celia destroyed the Texas Department of Mental Health and Retardation School.

August 6, 1970: The 49th Tactical Fighter Wing was awarded the Mackay Trophy for exceptional meritorious achievement in aerial flight in completing a flawless redeployment of its 72 F-4D aircraft from Spangdahlem AB, Germany, to Holloman AFB, N. Mex.

August 6, 1970: The United States and Spain signed a 5-year agreement allowing the United States to continue shared use of four Spanish military bases. In return, the United States will contribute to the modernization of the Spanish armed forces.

August 6, 1970: Col. William A. Jones, III, was posthumously awarded the Medal of Honor at White House ceremonies for heroic action in a 1968 Vietnam incident. Colonel Jones was commander of the 1st Flying Training Squadron at Andrews AFB, Md., when he was killed in a private plane crash near Woodbridge, Va., on Nov. 15, 1969.

August 24, 1970: Two Air Force search and air rescue helicopters, HH-53s successfully completed the first nonstop transpacific helicopter crossing in a 9,000-mile ferry flight from Eglin AFB, Fla., to Da Nang Airport, Vietnam.

August 28, 1970: The first Demonstration and Shakedown Operation Minuteman III was launched in the initial test using Strategic Air Command crews, operational hardware, and procedures.

August 28, 1970: Col. David J. Schmerbeck, Ubon RTAFB, Thailand, logged the 8th Tactical Fighter Wing's 100,000th combat sortie.

September 1, 1970: Air Force helicopters of the Aerospace Rescue and Recovery Service began participation in the Military Assistance for Safety in Traffic (MAST) project. The project is designed to determine the value of helicopters in providing medical assistance to automobile accident victims, and other persons needing emergency medical care in the civilian community.

September 4, 1970: A new 1,000-man dormitory, more reminiscent of a college dormitory than a barracks, was dedicated at Lowry AFB, Colo.

September 17, 1970: Gunship developer, pilot, and program director, Maj. Ronald W. Terry, received the 1969 Dr. Harold Brown Award for achievement in research and development. Major Terry presently heads the gunship system program office at Aeronautical Systems Division, Wright-Patterson AFB, Ohio.

September 18, 1970: Humanitarian airlift operations to Jordan conducted by Tactical Airlift Command C-130 crews from Langley AFB, Va.; Dyess AFB, Tex.; Pope AFB, N.C.; and Forbes AFB, Kans.

September 24, 1970: Air Force implemented the policy that certain Army and Navy ROTC graduates may now apply for Air Force commissions, and that Air Force graduates may transfer to another Service.

September 28, 1970: A U.S. contingent composed of the Army's 32d Mobile Surgical Hospital, Germany, and the Air Force's 48th Air Transportable Hospital, England, and support elements began arriving in war-torn Jordan. The original complement totaled 240 personnel and was flown to Amman in 25 sorties in 2 days.

September 29, 1970: The National Security Agency "Travis Trophy" awarded annually to the U.S. service cryptologic agency which makes the most significant contribution in the fields of operations, management, administration, or suggestions was awarded to the U.S. Air Force Security Service (USAFSS). This is the second consecutive year USAFSS has won this award.

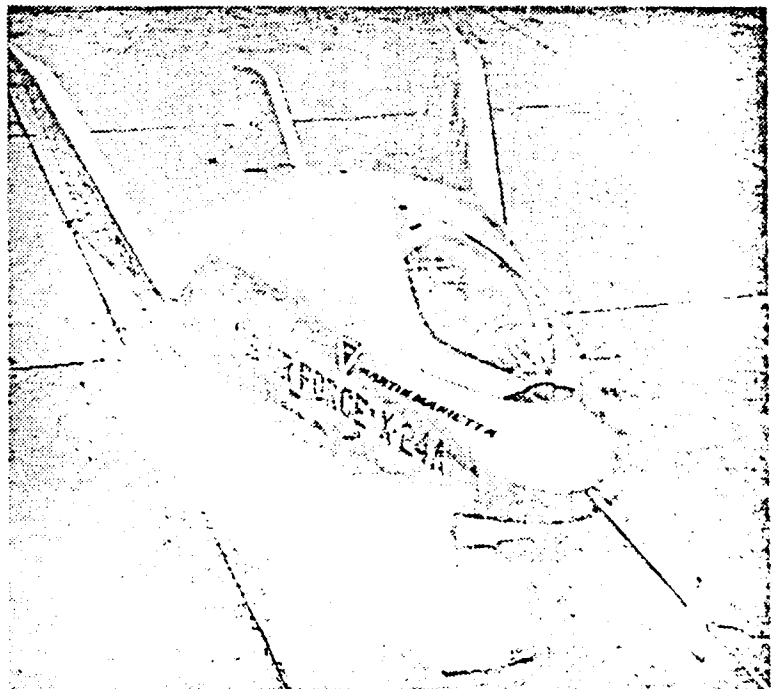
October 1, 1970: The "bare base" concept became a reality with the establishment of the first operationally-ready "heavy bare" squadron, the 336th Tactical Fighter Squadron, Seymour Johnson AFB, N.C.

October 2, 1970: The U.S. Air Force Special Operations Force, Hurlburt Field, Fla., took possession of the new UH-1N Bell "Twin Huey." It is the first operational unit in the Air Force to have the helicopter.

October 11, 1970: The first U.S. Air Force Undergraduate Helicopter Pilot Training student entered training at Fort Wolters, Tex. The U.S. Army will train 225 helicopter pilots for the Air Force annually.

October 13, 1970: Training began for 203 airmen to serve as air marshals on U.S. commercial aircraft.

October 21, 1970: The X-24A aerospace vehicle made its first supersonic speed flight at the Air Force Flight Test Center, Edwards AFB, Calif.



October 22, 1970: The first salvo launch of two Minuteman II intercontinental ballistic missiles was held at Vandenberg AFB, Calif.

October 22, 1970: The Chief of Staff approved a new program to construct Temporary Lodging Quarters (TLQs) funded from grants by Air Force Central Welfare Fund.

October 27, 1970: The Chief of Staff directed personal involvement by Commanders, and continuous emphasis to reduce irritants and create the best possible conditions for Air Force service.

October 27, 1970: Doctors at Wilford Hall USAF Medical Center, Lackland AFB, Tex., developed a new device which saved 50 infants from almost certain death by suffocation. Costing only about \$1,000 and built from various standard hospital components, the device gives physicians precise control over pressure, composition, and volume of air, oxygen, and mists to help newborn babies breathe.

November 1, 1970: During their off-duty time, Air Force physicians assigned to USAF Hospital, Wurtsmith AFB, Mich. began free medical care for nearby Chippewa Indian residents under Domestic Action Program.

November 1, 1970: The 336th Tactical Fighter Squadron began the first Air Force tests of new bare base mobility equipment in a field exercise at North Field, S.C. The exercise demonstrated the capability to deploy and operate from a bare base site using specially designed air transportable, expendable shelters and work facilities, including dormitories, workshops, hangars, control tower, medical facilities, and electric and water systems.

November 4, 1970: Modernization of nine Air National Guard and Air Force Reserve flying units got underway as they began receiving A-37, F-100, F-105, and C-130 aircraft.

November 5, 1970: The 57th Fighter Interceptor Squadron, Keflavik, Iceland, was named the winner of the annual Hughes Trophy as the outstanding fighter interceptor squadron of the Air Force.

November 13, 1970: An initial class of 100 airmen medical technicians began specialized clinical training to qualify them to perform many of the tasks previously performed by doctors. Graduates will relieve general medical officers in suturing wounds, applying and removing casts and dressings, and accomplishing routine physical examinations.

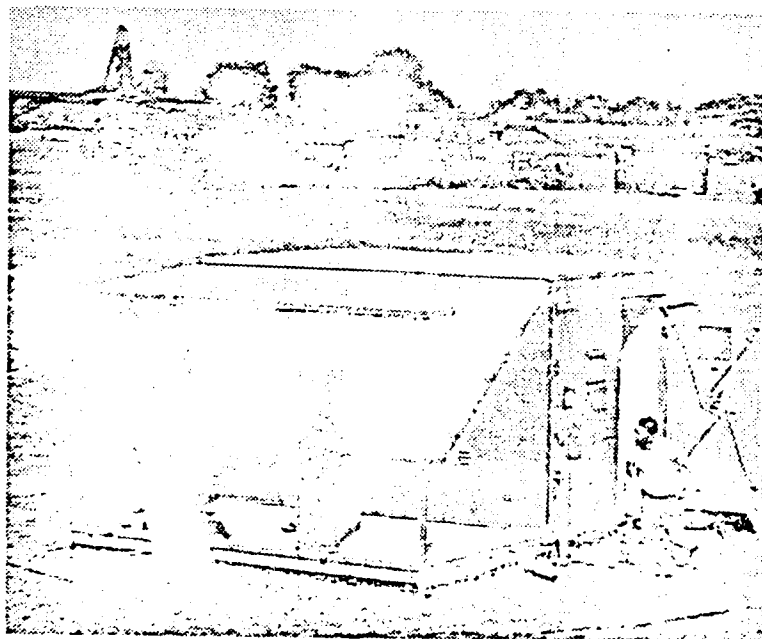
November 17, 1970: C-141 Starlifters of the Military Airlift Command began the airlift of men and equipment to Dacca, East Pakistan to aid that country's recovery from massive tidal waves.

November 20, 1970: The Northrop Corporation of Hawthorne, Calif., was selected to produce the new international fighter aircraft, designated the F-5-21 *Freedom Fighter*, with initial funding of \$21 million.

November 20, 1970: United States Air Forces Southern Command celebrated 30th anniversary as a major air command, while its aircraft and personnel assisted Colombians hard hit by floods.

November 21, 1970: A special task force of Air Force and Army volunteers made a daring attempt to rescue American servicemen from a prisoner-of-war camp 20 miles west of Hanoi. Brig. Gen. Leroy J. Manor led the mission, and was one of 39 Air Force personnel participating in the effort. No prisoners were found.

December 5, 1970: Air Force Reservists from the 945th Military Airlift Group, Hill AFB, Utah, assisted in a domestic action program to provide 40,000 pounds of food and clothing to Navajo Indians on reservations spanning the corners of four states.



December 11, 1970: First color, closed-circuit educational television production studio in the U.S. Air Force was formally opened at the U.S. Air Force Officer Training School at Lackland AFB, Tex.

December 14, 1970: The final research and development launch of a Minuteman III intercontinental ballistic missile was made from Cape Kennedy AFS, Fla., under supervision of Air Force Systems Command engineers.

December 16, 1970: The 509th Bombardment Wing, Pease AFB, N.H., received the first FB-111A assigned to a Strategic Air Command combat unit.

December 21, 1970: The Alaskan Air Command celebrated its 25th anniversary.

December 22, 1970: Fairchild Hiller Corporation, Republic Division, Farmingdale, N.Y., and Northrop Corporation, Hawthorne, Calif. were selected to participate in the competitive prototype development phase of the A-X specialized close air support aircraft program. The A-X will be a rugged, twin-engine, single-place aircraft with short takeoff and landing capabilities and excellent maneuverability.

December 31, 1970: Col. Jeanne M. Holm, director of Women in the Air Force, among 73 Air Force officers nominated by President Nixon, and confirmed by the U.S. Senate, for promotion to the temporary grade of brigadier general, which will make her the first woman in the Air Force to attain general-officer status.

1971

January 1, 1971: Special additional pay of \$50 per month was authorized to induce qualified volunteers for recruiting duty.

January 8, 1971: The Air Force's first tactical squadron of Minuteman III missiles was completed by Air Force Systems Command at Minot AFB, N.D. The squadron consists of five manned launch control centers and 50 unmanned silo launchers.

January 8, 1971: The Air Force relinquished operation and ownership of its Alaskan Communications System to RCA. Selling price was \$31,460,519.

January 12, 1971: The Air Force ordered the start of full production of its Short Range Attack Missile (SRAM). The missile is built by Boeing and will be used by the FB-111, B-52 and proposed new B-1.

February 2, 1971: The Air Force launched NATO's second communications satellite. A Thor-Delta booster from Cape Kennedy lifted the drum-shaped "NATO B" into a 22,000-mile-high synchronous orbit over the Atlantic Ocean to back-up the first NATO satellite launched in March 1970.

February 3, 1971: The Air Force announced that it has experienced a 25 percent improvement in its traffic safety record over the last 4 years. The decrease was attributed to its extensive driving safety program.

February 21-25, 1971: More than 1,200 National Guardsmen assisted in disaster relief operations in six states hit by tornadoes, snowstorms and earthquakes. Air National Guard participation included the air drop of 300 tons of hay to snowbound cattle by C-124 aircraft assigned to the Oklahoma ANG.

February 27, 1971: Air Force launched Operation Haylift in response to urgent pleas from farmers in blizzard-swept Kansas, and dropped 35,000 bales (nearly a million pounds) of hay for 275,000 cattle stranded in deep snow. The hay was provided by the American Humane Society.

March 2, 1971: A policy was announced which allows Air Force women who become pregnant to request a waiver to remain on active duty, or to be discharged and return to duty within 12 months of discharge.

March 5, 1971: The Aerospace Defense Command began realigning its operational elements to move from a broad defense of the CONUS concept to one of perimeter defense along the northern border and the eastern and western coastal regions. The move involved 19 installations in 13 states and included the transfer of remaining ADC F-101 aircraft to Air National Guard units.

March 8, 1971: The Limited Privileged Communication Program (LPCP) was established which encourages drug abusers to seek medical attention by offering UCMJ immunity for use. The program guarantees no less than honorable or general discharge.

March 10, 1971: Ten Japanese fishermen shipwrecked 200 miles southwest of Kadena, Okinawa, were saved from rough surf and a coral reef by an Air Force helicopter crew.

March 17, 1971: Jane Leslie Holley became the first woman commissioned through the coeducational AFROTC program. She graduated from Auburn University, Auburn, Ala.

March 18, 1971: Capt. Marcelite C. Jordon became the first woman aircraft maintenance officer after completion of the Aircraft Maintenance Officer's School. She was previously an administrative officer.

April 7, 1971: 2d Lt. Susanne M. Ocobock became the first woman Civil Engineer in the Air Force and was assigned to Kelly AFB, Tex.

May 7, 1971: The Air Force announced that 1970 was the safest flying year in its history. Its major accident rate was 3.0 per 100,000 flying hours.

May 27, 1971: The Boeing Co. was awarded an \$81,745,707 contract for the production of 19 737 jet transports for use in the airborne portion of the Air Force's new Undergraduate Navigator Training System. An earlier contract was awarded to Honeywell, Inc. to build 52 ground simulators for the system.

June 8, 1971: An Air Force Thor space booster with a Burner II upper stage placed two instruments into a circular 300 nautical mile polar orbit as part of the Department of Defense Space Experiments Support Program (SESP). Primary purpose was to test a celestial mapping service.

June 16 to July 18 1971: Four C-130s from Pope AFB, N.C., flew 308 sorties in Operation Bonny Jack, the humanitarian airlift of East Pakistani refugees from the Indian border state of Tripura to resettlement areas in Gauhati, further inland. On return flights they carried more than 1,750 tons of rice to feed refugees remaining Tripura. On the initial deployment from CONUS, the C-130s delivered one million doses of anti-cholera vaccine to India.

June-July 1971: Air Force C-130 and C-141 transports airlifted 1,750 tons of rice and

almost 190 tons of relief material in support of East Pakistan refugees. Included were 10 jeep ambulances donated by the Japanese Red Cross for medical work among the refugees.

July 1, 1971: Selfridge AFB, Mich., was turned over by the Aerospace Defense Command to the Air National Guard. It is the first major active Air Force base to come under control of the Air Guard.

July 11-22, 1971: Seven UC-123Ks from Langley AFB, Va., and Hurlburt Field, Fla., and eight C-47s from England AFB, La., sprayed more than 2.5 million acres in southeastern Texas with malathion to combat an outbreak of Venezuelan Equine Encephalomyelitis. The operation, conducted in conjunction with the U.S. Department of Agriculture, was nicknamed Combat Vee.

July 16, 1971: Jeanne M. Holm, Director of Women in the Air Force, was promoted to brigadier general. She is the first woman in the history of the Air Force to attain general officer rank.

July 22, 1971: The development flight test program for the

Short Range Attack Missile (SRAM) was completed successfully. The program included 38 test flights over the White Sands Missile Test Range in New Mexico.

July 23, 1971: Hughes Aircraft Co. was awarded a \$69,910,128 contract to build 2,000 Maverick (AGM-65A) air-to-surface missiles for use on F-4E and A-7D aircraft.

July 26, 1971: With an all Air Force crew composed of Col. David R. Scott, Lt. Col. James B. Irwin, and Maj. Alfred M. Worden, Apollo 15 blasted off from Cape Kennedy at 9:34 A.M., EDT. The mission was described as the most scientifically important and, potentially, the most perilous lunar trip since the first landing. Millions of viewers throughout the world watched as color TV cameras covered Scott and Irwin as they explored the lunar surface using a moon rover vehicle for the first time.

July 29, 1971: The experimental Air Force X-24A lifting body completed its flight test program, and work was begun to convert it to a markedly different shape with a new designation, X-24B.



August 6, 1971: An Air Force Atlas rocket was launched from Vandenberg AFB, Calif., to place nine experiments into the three different orbits.

September 10, 1971: USAF's 17th Special Operations Squadron flew its final AG-119G gunship mission and began actions to turnover its aircraft to the VNAF. Nicknamed "Shadow" for its close air support and interdiction of enemy supply lines on night missions, the AC-119 aircraft are the first assigned to the Vietnamese who will operate them from Tan Son Nhut Air Base.

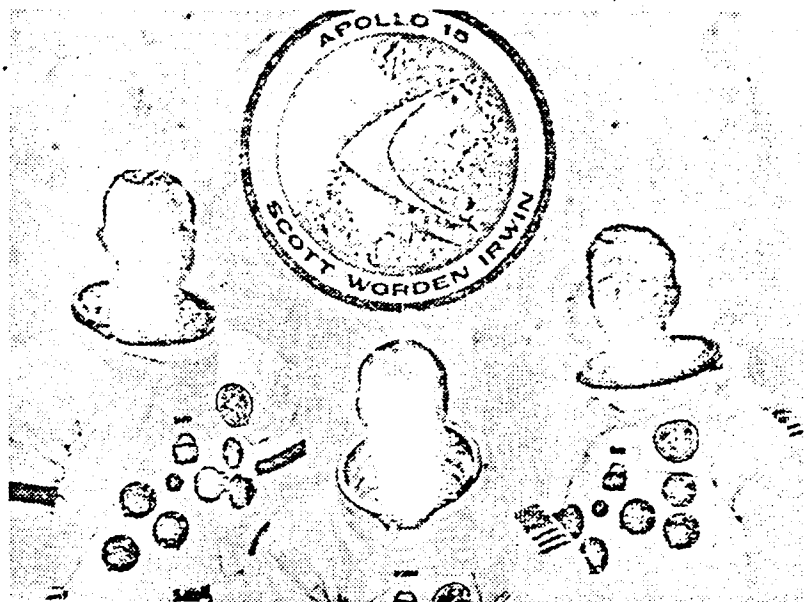
September 10, 1971: A new building for the USAF Museum at Wright-Patterson AFB, Ohio was dedicated by President Nixon.

September 12-16, 1971: Three USAF aircraft flew to Nicaragua to assist disaster relief operations in the aftermath of Hurricane Edith. Cargo included food, medical supplies, tents, a USAF radio jeep to assist in the coordination of emergency operations and fuel for rescue helicopters.

September 14, 1971: Fifteen USAF C-7 Caribou aircraft began a 10-day, 8,000 mile return flight to McClellan AFB from Cam Ranh Bay AB, Vietnam. While in SEA, the transport aircraft flew from unimproved airstrips providing fresh foodstuffs and supplies to otherwise inaccessible outposts.

September 1971: Using WC-130 aircraft, Air Force weathermen from Ramey AFB, P.R., participated in the 1st experimental seeding of a hurricane as a part of Project Stormfury in a joint effort by the Departments of Commerce and Defense.

September 26, 1971: Lt. Gen. Samuel C. Phillips was presented the Smithsonian Institution's Langley Medal for his contributions as Director of NASA's Apollo Manned Space Flight Program for 1964-69.



October 1, 1971: The 1970 Cheney Award was presented to Maj. Travis Wofford by Air Force Chief of Staff, Gen. John D. Ryan. Major Wofford received the award for an act of heroism performed as a helicopter rescue pilot in Southeast Asia.

October 1, 1971: CMSgt. Richard D. Kisling became the third Chief Master Sergeant of the Air Force. He replaced CMSgt. Donald Harlow who retired.

November 1, 1971: A USAF Skill Center was established at Forbes AFB, Kans. The Center will provide civilian job-training in employable skills for airmen leaving the Service.



December 1, 1971: The President signed legislation that increased the number of Air Force Reserve Officers' Training Corps scholarships from 5,500 to 6,500.

December 10, 1971: The Senate passed a bill which authorized additional Air Force Academy appointments for sons of POWs and MIAs.

December 31, 1971: In 1971, the Civil Air Patrol flew 30,909 flying hours in search and rescue activities and was credited with saving 24 lives, evacuating 128 people, and assisting an additional 121 persons. The previous record of 27,626 flying hours attained in 1969 was exceeded by 3,282 hours or a gain of 11.9 percent.