

On The Brink

1960–1969

The golden anniversary of naval aviation was celebrated in 1961 along with a new stature of the fleet's air arm as an effective fighting force. One nuclear-powered and two conventionally-powered attack carriers joined the operating forces, with two additional attack carriers commissioned by the end of the decade. The Navy acquired four new amphibious assault ships and other vessels to exploit the unique capabilities of helicopters in vertical assault and replenishment. New high-performance aircraft went into operation along with the development of vertical- and short-takeoff-and-landing aircraft. Innovative types of missiles appeared and Sparrows and Sidewinders received enhanced capabilities, but the importance of blimps and flying boats faded because of the advent of new technologies.

During the Cuban Missile Crisis the Navy exerted its traditional role of sea control by imposing a naval blockade that proved instrumental in averting global thermonuclear war. The round-the-world cruise of a nuclear-powered task force and operations in the Indian Ocean carried the flag into foreign ports. Naval forces responded to crises in Africa, the Middle East, the Caribbean, and Berlin; evacuated Americans trapped by fighting, and by their presence reaffirmed the role of the service in keeping the peace. Ships and aircraft aided the stricken when hurricanes, typhoons, and earthquakes struck in widely distant points.

In Southeast Asia, the nation responded to communist aggression with retaliatory air strikes that escalated into a protracted war of limited objectives and little relevancy to U.S. national security. The aircraft of the Seventh Fleet carried the burden of the naval air war, but the requirement for sustained naval action and the support of allied troops ashore challenged logistic planners and force commanders.

The conquest of space began in earnest as manned orbital flight became a reality and culminated in the

first manned lunar landing. Half the nation's astronauts possessed Navy or Marine backgrounds and naval aviators made the first American suborbital and orbital flights. Navy flight surgeons joined in the study of the physiological effects of space flight. A Navy space surveillance system helped forge the necessary links for a continuous watch on space. Satellites developed by Navy scientists expanded human knowledge of the cosmos, and a naval satellite navigation system provided an accurate means to all nations of traveling the earth's oceans. Carriers or amphibious assault ships supported orbital missions to cover emergency landings, and recovered astronauts and their spacecraft following reentry.

The Navy's support of the space program resulted in a number of organizational adjustments as well as the formation of a recovery force command. Broader and more basic changes in departmental structure occurred as a result of a series of high-level studies directed toward clarifying the lines of authority and responsibility. The abolition of the bureau system and centralization of material support under a strengthened Material Command placed under the direct control of the Chief of Naval Operations occurred, the project manager concept received new impetus, and other changes radiated outward to the operating forces and shore establishments.

1960

1 JANUARY • Electronic countermeasures squadrons were redesignated fleet air reconnaissance squadrons without a change of their VQ letter designation.

15 JANUARY • The transfer of the Naval Weather Service Division from the Office of Deputy Chief of Naval Operations (Operations & Readiness) to the staff of Vice CNO occurred, and the Office of the Naval Weather Service



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Enterprise (CVAN 65) is the world's first nuclear-powered aircraft carrier.

was set up as a field activity under the management control of the CNO. The responsibilities of the new office included the management control of the integrated fleet weather central system and the technical direction of meteorological matters within shore establishments and the operating forces.

15 JANUARY • National Air and Space Administration approved the *Overall Plan for Department of Defense Support for Project Mercury Operations*. The Navy's portion, entitled *Operation Plan COMDESFLOTFOUR No. 1-60*, provided for recovery procedures covering Mercury-Redstone and Mercury-Atlas missions.

26 JANUARY • The first of two giant unmanned balloons launched from *Valley Forge* (CVS 45) south of the Virgin

Islands during Project Skyhook—the recording of cosmic ray activity. The balloons were nearly 50-stories tall, had a lifting gas capacity greater than that of rigid airship *Akron* (ZRS 4), and carried 2,500-pounds including 800-pounds of film to perform the readings. The first balloon achieved an altitude of 116,000 feet and remained aloft for eight hours, while the second reached 113,000 feet during a flight of 26 ½ hours. Early warning aircraft from *Valley Forge* and ashore tracked the balloons and a destroyer recovered the instruments. The Office of Naval Research and the National Science Foundation jointly sponsored the project.

FEBRUARY • Through April, the Naval School of Aviation Medicine at NAS Pensacola, Fla., modified a standard 20-man raft to enable its placement around the base of a floating Mercury spacecraft with the impact skirt extended.

The device raised the spacecraft high enough in the water to permit egress from the side hatch.

25 FEBRUARY • An R6D-1, BuNo 131582, carrying seven crewmembers of VR-1, 19 members of the Navy Band, and a team of 12 antisubmarine warfare specialists collided with a Brazilian DC-3 of REAL Transportes Aéreos, registered PP-AXD, over Sugarloaf Mountain at Rio de Janeiro, Brazil. The accident claimed the lives of all but three of the 38 sailors on board the *Liftmaster* and all 26 people—four crewmembers and 22 passengers—on board the airliner.

29 FEBRUARY • The Department of Defense announced a successful demonstration by the Navy's Mine Defense Laboratory and the Air Mine Defense Development Unit of two improvements in airborne mine countermeasures at Panama City, Fla. The first consisted of air-portable minesweeping gear that enabled a helicopter to become a self-sufficient aerial minesweeper. The second concerned equipment for transferring the minesweeping-gear towline from a surface minesweeper to a helicopter, from one helicopter to another, or from a helicopter to a surface minesweeper.

29 FEBRUARY • An earthquake razed the area around Agadir, Morocco. Aircraft flew sailors and Marines from NAS Port Lyautey to aid the victims, and a Navy-wide effort subsequently brought food and clothing to the people from Reserve and other units from as far as Seattle, Wash.

1 MARCH • A ZPG-3W airship of ZW-1 returned to NAS Lakehurst, N.J., after 49.3 hours on station and 58 hours in the air during an Air Defense Command barrier patrol over the North Atlantic. This new record for continuous patrol more than doubled the best time logged by its smaller ZPG-2W predecessor.



Valley Forge (CVS 45) prepares to launch a Project Skyhook unmanned balloon to record cosmic ray activity, 26 January 1960.

18 MARCH • On the first firing test of Project Hydra, a 150-pound rocket successfully ignited underwater and launched into the air at Naval Missile Center Point Mugu, Calif. The test demonstrated the feasibility of launching rockets while floating upright in the ocean and gave promise of eliminating the cost of launching pad construction and allowing greater freedom in the choice of launching sites.

25 MARCH • *Halibut* (SSGN 587) fired a Regulus I in the first launch of a bombardment missile from a nuclear-powered submarine during training exercises off Oahu, Hawaii.



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A ground antenna for navigation satellite Transit 1B.

26 MARCH • Elements of Marine Aircraft Wing 1 participating in amphibious exercise Blue Star established an operational jet airstrip on the south shore of Formosa (Taiwan) within 72 hours of landing. Expeditionary airfield matting covered the 3,400-foot strip, and the equipment included a portable mirror landing system, TACAN, fuel tank farm, and a tower control system. A4D Skyhawks operated from it with the assistance of JATO, while F4D-1 Skyrays and F8U Crusaders used afterburners to takeoff.

28 MARCH • The astronauts of Project Mercury received their first open-water egress training from a spacecraft with the Naval School of Aviation Medicine, NAS Pensacola, Fla. The men emerged from a completely restrained state in the spacecraft to a life raft in conditions of up to ten-foot swells in an average of about four minutes. The training concluded on 1 April.

1 APRIL • CVSG-53 and -59 were established at NAS North Island, Calif. Each group consisted of one HS and two VS squadrons. This marked the beginning of a reorganization of antisubmarine aviation that called for the formation of nine CVSGs, and for the assignment of an additional replacement CVSG and a patrol squadron in each fleet to perform functions paralleling those carried out by the

previously established replacement carrier air groups.

13 APRIL • A Thor Able-Star missile launched the Applied Physics Laboratory–designed navigation satellite Transit 1B into orbit from Cape Canaveral, Fla. The satellite emitted a radio signal at a precise frequency that surface receiving stations used as a baseline for measurement of the signal's doppler shift to determine the station's position with high accuracy. Other experiments performed with this launch included the separation and entry into its own orbit of an uninstrumented satellite, thereby demonstrating the feasibility of launching multiple satellites from a single vehicle.

19 APRIL • The Naval Space Surveillance Facility was established at Dahlgren, Va.

1 MAY • Seventeen basic training groups of the Naval Air Training Command were redesignated training squadrons (VT) and established as separate units, each under a commanding officer.

22 MAY • An earthquake measuring an estimated 9.5 on the moment magnitude scale devastated the area around Cañete, Chile, and generated tsunamis that struck the Pacific coast of South America, the Aleutian Islands, New Zealand, Australia, the Philippines, Japan, and Hilo, Hawaii—where 61 people died. On 25 June, dock landing ship *Catamount* (LSD 17) sailed from NS San Diego, Calif., to assist victims of flooding in the area around Valparaiso. The ship disembarked and transferred landing craft to the Chilean Navy, and provided critically needed transportation in the vicinity where tidal waves had destroyed piers. *Catamount* departed on 15 July.

3 JUNE • A Marine HUS-1 Seahorse successfully completed test launchings of AGM-12 Bullpup air-to-ground missiles at NATC Patuxent River, Md.

10 JUNE • Seven HSS-1Ns of HS-4, embarked on board *Yorktown* (CVS 10), rescued 53 men from British freighter *Shun Lee* when she broke up on Pratas Reef, 500 miles northwest of Manila, Philippines. Under storm conditions in the wake of Typhoon Mary, the Seabats pulled 25 men from the wreck and 28 more from Pratas Island inside the reef.

21 JUNE • Frigate *Norfolk* (DL 1) fired an RUR-5 ASROC (Anti-Submarine ROcket) in a public demonstration from a position off Key West, Fla. The event marked the completion of a two-month technical evaluation of the weapon, which featured a rocket-powered airframe carrying a homing torpedo or depth charge.

22 JUNE • A Thor Able-Star missile launched navigation satellite Transit 2A into orbit from Cape Canaveral, Fla. Naval Research Laboratory Solar Radiation I satellite mounted pickaback also entered into orbit. Transit 2A further developed Doppler navigation techniques and confirmed the practicability of using satellites for precise geodetic surveys, provided critical measurements of the effect of the ionosphere on electromagnetic waves, and measurements of high frequency cosmic noise that had been requested by the Canadian Government. The satellite had an operating life of 2 ½ years.

1 JULY • VRC-40, Cmdr. John H. Crawford commanding, was established at NAS Norfolk, Va., as the first carrier on-board delivery squadron.

1 JULY • An experimental DSN-1 successfully demonstrated the operating capabilities of a drone helicopter designed for use in antisubmarine warfare from destroyers when it landed on board frigate *Mitscher* (DL 2) off the coast of Long Island, N.Y. A safety pilot manned the drone but remote control from ashore flew and maneuvered it around the ship and into position for a landing before the pilot took command and made the final touchdown.

1 JULY • A Pacific Missile Range Facility was established at Eniwetok, Marshall Islands, to support the operations of the Pacific Missile Range, Calif.

9 JULY • On 30 June, the Belgian Congo (Zaire) gained its independence but an army revolt led to widespread violence and the collapse of order. On this date, *Wasp* (CVS 18),



DS-1382, shown modified as the first QH-50D, was one of 373 DSN-3 (later QH-50C) drone antisubmarine helicopters built. It is carrying two Mk 44 torpedoes.

uniquely embarking a Marine company, sailed from NS Guantánamo Bay, Cuba, for the coast of Africa to evacuate Americans and support UN intervention. By the time *Wasp* departed the area in early August, the ship had also supplied some 250,000 gallons of aviation gasoline in support of the UN airlift.

18 JULY • The Navy terminated the Corvus air-to-surface missile program to permit increased emphasis on other weapon systems that offered a wider scope of employment.

20 JULY • *George Washington* (SSBN 598) launched a solid-propellant Polaris A-1 fleet ballistic missile for the first time while submerged off Cape Canaveral, Fla. The missile broke clear of the water, ignited in the air, and streaked almost 1,100 nautical miles toward its target down the Atlantic Missile Test Range. At 1239, Cmdr. James B. Osborn, commanding officer of the boat's Blue Crew, sent President Dwight D. Eisenhower a message: "Polaris—from out of the deep to target. Perfect." About two hours later, *George Washington* launched a second Polaris that also successfully struck its target.

21 JULY • The Navy announced the issuance of a contract to Douglas Aircraft Company for the development of the F6D Missileer for launching Eagle long-range air-to-air guided missiles.

1 AUGUST • Naval Air Rocket Test Station was disestablished at Lake Denmark, N.J. The Navy transferred its liquid rocket development projects to other activities



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Cmdr. Leroy A. Heath (left) and Lt. Henry L. Monroe review their flight notes after breaking the altitude record for a 1,000-kilogram payload with an altitude of 91,450.8 feet in an A3J Vigilante, 13 December 1960.

including NOTS China Lake, Calif.; Naval Propellant Plant, Indian Head, Md.; and Naval Weapons Laboratory, Dahlgren, Va. The Army began the incorporation of the reassigned land into Picattinny Arsenal.

11 AUGUST • An HRS-3 operating from cargo ship *Haiti Victory* (T-AK 238) made the first recovery of a man-made object that had been in earth orbit. Satellite *Discoverer XIII* completed its 17th pass around the earth and discharged an instrumented capsule that splashed down about 330 miles northwest of Honolulu, Hawaii. Air Force planes located the capsule and directed the ship to the recovery within three hours of its landing.

2 SEPTEMBER • Capt. Holden C. Richardson, CC, (Naval Aviator No. 13) died at Bethesda, Md. Richardson became the Navy's first engineering test pilot, helped to develop the initial catapults, co-designed and supervised the construction of the NC flying boats, piloted one of the planes (NC-3) on the transatlantic attempt, and served as one of the original members of NACA.

5 SEPTEMBER • Lt. Col. Thomas H. Miller Jr., USMC, set a new world speed record for 500 kilometers at 1,216.78 mph in an F4H-1 Phantom II over a triangular course at Edwards AFB, Calif.

19 SEPTEMBER • An Argo D-8 rocket launched the NASA Nuclear Emulsion Recovery Vehicle from Naval Missile Facility Point Arguello, Calif. The instrumented capsule reached an altitude of 1,260 miles and landed 1,300 miles down range for ship recovery.

25 SEPTEMBER • Cmdr. John F. Davis averaged 1,390.21 mph for 100 kilometers in an F4H-1 Phantom II over a closed circuit course, bettering the existing world record for that distance by more than 200 mph.

20 OCTOBER • The Department of Defense announced the establishment under Navy management of an Army-Navy-Air Force program to develop the prototype of an operational vertical-takeoff-and-landing aircraft to test its suitability for air transport service.

10 NOVEMBER • The Secretary of Defense directed the placement of the Navy Space Surveillance System and the USAF Space Track System—each performing similar services over different sections of the surveillance network—under the control of the North American Air Defense Command for military functions.

15 NOVEMBER • The Polaris fleet ballistic missile weapon system became operational when submarine *George Washington* (SSBN 598) sailed with her principal armament of 16 Polaris A-1 missiles from NWS Charleston, S.C.

17 NOVEMBER • At the request of Guatemala and Nicaragua, President Dwight D. Eisenhower ordered a naval patrol of Central American waters to intercept and prevent communist-led invasion attempts of those countries from the sea. At times, *Wasp* (CVS 18) and *Shangri-La* (CVA 38) patrolled until diffused tensions prompted their recall on 7 December.

13 DECEMBER • An A3J Vigilante crewed by pilot Cmdr. Leroy A. Heath and bombardier/navigator Lt. Henry L. Monroe carried a payload of 1,000-kilograms to an attitude of 91,450.8 feet over Edwards AFB, Calif. This established a new world altitude record with payload and surpassed the existing record by more than four miles.

19 DECEMBER • A catastrophic fire erupted on the hangar deck of *Constellation* (CVA 64) during the final stages of her construction at New York Naval Shipyard, Brooklyn, N.Y. Fifty civilian workers died in the blaze and the ship sustained \$75 million in damages.

19 DECEMBER • Mercury-Redstone 1A launched from Cape Canaveral, Fla. The unmanned, suborbital mission came after a failed attempt on 21 November. This mission qualified the spacecraft for space operations and the flight system for a planned primate flight. A P2V Neptune spotted the capsule during its descent toward the Atlantic and a helicopter from Marine Aircraft Group 26, embarked on board *Valley Forge* (CVS 45), recovered the spacecraft within 47 minutes of the launch.

22 DECEMBER • HSS-2 Sea Kings of HS-3 and HUP Retrievers of HU-2, embarked on board *Valley Forge* (CVS 45), rescued 27 men from oiler *Pine Ridge* when she broke-up in heavy seas about 100 miles off Cape Hatteras, N.C.

1961

1 JANUARY • By this time, North Vietnamese-supported Prince Souphanouvong and the communist Pathet Lao had seized positions on the Laotian *Plaine Des Jarres* from American-supported Prince Souvanna Phouma and his royalists. On this date, the Seventh Fleet deployed *Lexington* (CVA 16), *Bennington* (CVS 20), and *Coral Sea* (CVA 43) to the South China Sea to deter further communist gains until the situation stabilized. On 6 January the carriers received orders to turn around.

11 JANUARY • President-elect John F. Kennedy released a report from the Ad Hoc Committee on Space named to review the space and missile programs and to identify problems requiring prompt attention. The committee's conclusions included the requirement for the redefinition of the objectives of the national space program, the assignment of the National Aeronautics and Space Council as the effective agency to manage the space program, and the requirement for a single responsible agency within the defense establishment to manage the military aspects of the space program.

31 JANUARY • Mercury-Redstone 2 launched from Cape Canaveral, Fla. The suborbital mission obtained physiological and performance data during ballistic flight on the occupant, a 37-pound chimpanzee named Ham. The over acceleration of the launch vehicle coupled with the velocity of the escape rocket pushed the spacecraft to an altitude 42 miles higher and a range 125 miles farther than planned. 1st Lts. John A. Hellridger, USMC, and George F. Cox, USMC, of HMRL-262 from Marine Aircraft Group 26 manned an HUS-1 Seahorse embarked on board dock landing ship *Donner* (LSD 20), and recovered the capsule and Ham from the Atlantic. *Donner* proceeded at flank speed to disembark the chimpanzee at Grand Bahama Island, and then sailed to Cape Canaveral to offload the capsule.

1 FEBRUARY • The Space Surveillance System was established with its headquarters at Naval Weapons Laboratory, Dahlgren, Va., Capt. David G. Woosley commanding. The system had functioned as an experimental research project since 1959, but this action made it an operational command.

21 FEBRUARY • A Thor Able-Star missile launched navigation satellite Transit 3B and the piggybacked Low Frequency Transionospheric Satellite (Lofti) from Cape Canaveral, Fla. A programmer malfunction prevented their separation from the booster and each other causing them to reenter the atmosphere after only 37 days. Despite this, both functioned and Transit 3B received prototype navigational messages and reported back to provide the first complete demonstration of all features of the navigation satellite system.

21 FEBRUARY • Mercury-Atlas 2 launched from Cape Canaveral, Fla. The suborbital mission qualified the Mercury-Atlas combination in flight and evaluated the spacecraft performance under near maximum reentry loads. An HMRL-262 HUS-1 Seahorse from Marine Aircraft Group 26, embarked on board dock landing ship *Donner* (LSD 20), recovered the capsule in the Atlantic and offloaded the spacecraft at San Juan, P.R. In addition, on this date, NASA announced the selection of astronauts Lt. Col. John H. Glenn Jr., USMC; Cmdr. Alan B. Shepard Jr.; and Capt. Virgil I. Grissom, USAF; to begin special training for the first manned Mercury flight.



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Kitty Hawk (CVA 63), the name ship of her class of supercarriers, is an evolution of the *Forrestal*-class ships.

6 MARCH • The Secretary of Defense established defense policies and responsibilities for the development of satellites, antisatellites, space probes, and supporting systems. The action authorized each military department “to conduct preliminary research to develop new ways of using space technology to perform its assigned function.” The USAF received the responsibility for research, development, test, and engineering of Department of Defense space development programs and projects, but provisions granting exceptions made possible the Navy’s development of a unique space capability.

21 MARCH • Ongoing attacks by communist Pathet Lao insurgents threatened the stability of the royalist regime in Laos, and the Seventh Fleet dispatched ships to the South China Sea to monitor the fighting. Aircraft flew reconnaissance missions over Laos into June.

10 APRIL • Cmdr. Lloyd E. Newcomer of VX-6 piloted a C-130BL Hercules carrying a double crew of 16 and a special crew of five during the emergency evacuation of Soviet exchange scientist Leonid Kuperov from Byrd Station, Antarctica, to Christchurch, New Zealand. Kuperov suffered from an acute abdominal condition. This round-trip flight from Christchurch accomplished the first aerial mission to pierce the winter isolation of the Antarctic continent.

17 APRIL • *Brigadistas* (Cuban exiles) of Brigade 2506 opposed to the regime of Fidel R. Castro sailed from British Honduras (Belize) for Bahía de Cochinos (Bay of Pigs), Cuba, during Operation Zapata—an attempt to overthrow Castro. The United States concentrated naval support for the émigrés initially within Task Group Alpha (81.8), including *Essex* (CVS 9), with Carrier Anti-Submarine Air Group 60 embarked. Aircraft from *Essex* were to fly combat air patrols

over the invaders' landing craft and reconnaissance flights over Castro's forces. The force included 12 VA-34 A4D-2 Skyhawks, two S2F-1 Trackers and eight S2F-1s of VS-34, four AD5-W Skyraiders of VAW-12 Detachment 45, 15 HS-9 HSS-1 Seabats, one HUP-3 Retriever of HU-2 Detachment 45, and one TF-1 Trader. To accommodate the Skyhawks on board *Essex*, the S2F-1s of VS-39 temporarily operated from NAS Quonset Point, R.I.

Independence (CVA 62), with Carrier Air Group 7 embarked, sailed to host President John F. Kennedy for a scheduled naval firepower demonstration from NS Norfolk, Va. The crisis compelled the cancellation of the chief executive's visit and *Independence* made for the area south of NS Guantánamo Bay, Cuba. The United States did not intervene, however, and Castro rushed reinforcements that forced the evacuation or surrender of the *brigadistas* by 20 April. *Essex* returned to Quonset Point on 29 April. *Independence* did not reach the area in time to affect the outcome and returned on 30 April, anchoring in Hampton Roads, Va.

21 APRIL • The Office of the Pacific Missile Range Representative, Kaneohe, Hawaii, was redesignated and established as the Pacific Missile Range Facility, Hawaiian Area, to serve as the mid-Pacific headquarters for missile and satellite tracking stations located in the Hawaiian and central Pacific areas.

29 APRIL • *Kitty Hawk* (CVA 63), Capt. William F. Bringle commanding, was commissioned at Philadelphia Naval Shipyard, Pa., as the first of a class of attack carriers equipped with RIM-2 Terrier surface-to-air missiles.

4 MAY • Cmdr. Malcolm D. Ross and Lt. Cmdr. Victor A. Prather, MC, crewed a two-place open gondola Stratolab balloon from *Antietam* (CVS 36) sailing off the mouth of the Mississippi River. This, the largest balloon ever employed to date on a manned flight, attained a world record balloon altitude of 113,739.9 feet, 2 hours, 36 minutes after liftoff at a position about 136 miles south of Mobile, Ala. Prather fell from the sling of the recovery helicopter, his pressure suit filled with water, and he drowned before he could be reached. His body was never recovered.

5 MAY • Cmdr. Alan B. Shepard Jr. manned space capsule *Freedom 7* during the flight of Mercury-Redstone 3 from



A Marine HUS-1 Seahorse recovers Cmdr. Alan B. Shepard Jr. after his completion of the first U.S. manned space flight, 5 May 1961.

Cape Canaveral, Fla. The crew of an HMRL-262 HUS-1 Seahorse from Marine Aircraft Group 26, embarked on board *Lake Champlain* (CVS 39), visually followed the descent of *Freedom 7*. The Seahorse recovered the capsule at sea at 27°13' 7"N, 75°53' W, and transported the spacecraft and Shepard to the carrier. After preliminary medical and technical debriefing, a helicopter flew the astronaut to Grand Bahama Island for two days of complete debriefings. Shepard became the first American to ascend into space during this initial of two suborbital Mercury missions.

17 MAY • Cmdr. Patrick L. Sullivan and Lt. Beverly W. Witherspoon set a new world class speed record in an HSS-2 Sea King of 192.9 mph for three kilometers at Bradley Field, Windsor Locks, Conn.



NH 69959

Cmdr. Patrick L. Sullivan (left) and Lt. Beverly W. Witherspoon flying an HSS-2 helicopter, set a world class speed record.

24 MAY • Three F4H-1 Phantom IIs competing for the Bendix Trophy bettered the existing record for transcontinental flight from Los Angeles, Calif., to New York, N.Y. The winning team of pilot Lt. Richard F. Gordon Jr. and radar intercept officer Lt. j.g. Bobbie R. Young averaged 870 mph on the 2,421.4-mile flight, and set a new record of 2 hours, 47 minutes.

24 MAY • Cmdr. Patrick L. Sullivan and Lt. Beverly W. Witherspoon set a new world class speed record in an HSS-2 Sea King with a mark of 174.9 mph over a 100-kilometer course between Milford and Westbrook, Conn.

25 MAY • President John F. Kennedy requested additional appropriations from Congress totaling \$611 million for NASA and the Department of Defense to accelerate the space program. “I believe that this nation should commit itself to achieving the goal,” the chief executive declared, “before this decade is out, of landing a man on the moon and returning him safely to the earth.”

1 JUNE • Ships of the Second Fleet including *Intrepid* (CVA 11), *Randolph* (CVS 15), and *Shangri-La* (CVA 38), received orders to sail off the southern coast of Hispaniola when a general uprising appeared imminent after the assassination of Dominican Republic President (Gen.) Rafael Trujillo. The ships returned after the crisis passed.

21 JUNE • Secretary of the Navy John B. Connally Jr. approved plans for terminating the Navy’s lighter-than-air program, disestablishing all operational units by November, putting eight of the ten remaining airships in storage, and deactivating the overhaul and repair shop at NAS Lakehurst, N.J.

29 JUNE • A Thor Able-Star missile launched navigation satellite Transit 4A from Cape Canaveral, Fla., into a nearly circular orbit at a height of about 500 miles. Greb and Injun satellites on board failed to separate from each other but otherwise operated satisfactorily. Transit 4A was the first space vehicle to be equipped with a nuclear-powered generator.

10 JULY • The distribution of the HSS-1 Seabat manual promulgated the first NATOPS (Naval Air Training and Operating Procedures Standardization) Manual. This manual prescribed the standard operating procedures and flight instructions peculiar to Seabats and complemented the more technical information contained in the HSS-1 Flight Manual—also known as the “handbook.” As the system developed, the issuance of NATOPS flight manuals consolidated flight and operating instructions with the handbook information beginning with the F9F-8T Cougar manual on 15 December 1963. Further publications included the NATOPS Manual containing generalized instructions covering air operations, and other manuals dealing with such subjects as carrier operations, air refueling, instrument flight, and landing signal officer procedures.

18 JULY • An F4D-1 Skyray made the first of a series of eight unguided Sparoair II rocket launches to an altitude of 64 miles at Naval Missile Center, Point Mugu, Calif. The research rocket had been designed and built at Point Mugu by combining two Sparrow air-to-air missile rocket motors.

21 JULY • Capt. Virgil I. Grissom, USAF, piloted space capsule *Liberty Bell 7* during the launch of Mercury-Redstone 4 from Cape Canaveral, Fla. The spacecraft



Iwo Jima (LPH 2) is the first U.S. helicopter-capable amphibious assault ship to be designed and built as such.

splashed down near 27°34'N, 75°44'W, and *Randolph* (CVS 15), with Carrier Anti-Submarine Air Group 58 embarked, accomplished the recovery. A premature ejection of the hatch cover, however, caused flooding that made capsule retrieval impossible, and it sank in 2,500 fathoms. An HUS-1 Seahorse from Marine Aircraft Group 26 rescued Grissom and delivered the astronaut to the carrier. HUP-3 Retrievers of HU-2 Detachment 1 flew plane guard and two HSS-1N Seabats of HS-7 photographed the recovery. Grissom became the second American to ascend into space during this final of two suborbital Mercury flights.

3 AUGUST • The director of Defense Research and Engineering approved revisions to the tri-service vertical takeoff and landing program, whereby the administrative responsibility for a tilting wing aircraft was transferred from the Navy to the USAF, but the three services continued to share the cost equally. The aircraft was later developed as the Ling-Temco-Vought XC-142.

18 AUGUST • NASA announced that an analysis of Project Mercury suborbital data indicated the achievement of all objectives of the initial phase of the space program, and thereby concluded planning for additional Mercury-Redstone flights.

26 AUGUST • *Iwo Jima* (LPH 2), Capt. Thomas D. Harris commanding, was commissioned at Puget Sound Naval Shipyard, Bremerton, Wash., as the first amphibious assault ship to be designed and built as such. The new ship operated a helicopter squadron and embarked Marines in the “vertical envelopment” concept of amphibious assault.

28 AUGUST • NOTS China Lake, Calif., reported on tests of Snakeye I mechanical retardation devices under development to permit low-altitude bombing with the Mk 80 family of low-drag bombs. Four designs of retarders, two made by Douglas and two by the station, had been tested in flight on the station’s rocket-powered test sled or in the wind tunnel. One of the Douglas designs showed sufficient promise and resulted in the issuance of a contract to the company for a number of experimental and prototype units.

28 AUGUST • An F4H-1 Phantom II crewed by pilot Lt. Hunt Hardisty and radar intercept officer Lt. Earl H. DeEsch averaged 902.769 mph for a new low-altitude world speed record over a three-kilometer course at Holloman AFB, N. Mex.

11 SEPTEMBER • Task Force 135, Rear Adm. Frederick J. Brush commanding, including *Antietam* (CVS 36) and *Shangri-La* (CVA 38), received orders to sail to the Galveston-Freeport, Texas, area for disaster relief operations in the wake of Hurricane Carla.



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An aviation ordnanceman handles Snakeye bombs on board *Hancock* (CVA 19).

13 SEPTEMBER • Mercury-Atlas 4 launched from Cape Canaveral, Fla. The unmanned mission demonstrated the capabilities to fly a person in orbit and of the global Mercury tracking network. Dock landing ship *Plymouth Rock* (LSD 29) and destroyer *Decatur* (DD 936) recovered the capsule in the Atlantic after a single orbit.

1 OCTOBER • Renewed tensions over control of divided Berlin, East Germany, prompted President John F. Kennedy to activate Reserve units including five Naval Reserve patrol and 13 carrier antisubmarine squadrons.

8 OCTOBER • HUS-1 Seahorses of HMRL-362, embarked on board amphibious assault ship *Princeton* (LPH 5), plucked 84 men from U.S. merchant ship *Pioneer Muse* and Lebanese vessel *Sheik* after both ships ran aground on Kita Daita Jima in the Pacific. Attack cargo ship *Tulare* (AKA 112) directed the rescue.

16 OCTOBER • The Astronautics Operations Division Op-54 was transferred from the office of Deputy Chief of Naval Operations (Air) to Op-76 of the office of DCNO (Development) to reassign the responsibilities for the naval support of the space program's Project Mercury within OPNAV.

23 OCTOBER • Submarine *Ethan Allen* (SSBN 608) made the first underwater launch of a Polaris A-2 fleet ballistic missile. The Polaris soared 1,500 miles down the Atlantic Missile Range.

31 OCTOBER • Fleet Airship Wing One and ZP-1 and -3 were disestablished at NAS Lakehurst, N.J., as the last operating naval lighter-than-air units.

31 OCTOBER • Hurricane Hattie devastated British Honduras (Belize), killing an estimated 310 people. On 2 November, *Antietam* (CVS 36) sailed from NAS Pensacola, Fla., to render relief. HT-8 HO4S-3s and HMRL-264 HUS-1 Seahorses proved instrumental in reaching people trapped and isolated by debris, rugged country, and swamps during 207 sorties carrying more than 57 tons of food, water, and medical supplies. The helicopters also transported teams from the Naval School of Aviation Medicine and relief workers to Belize, Stann Creek, and other points. On 6 November, the ship departed but six doctors and six helicopters with 18 pilots and 25 crewmen briefly remained to continue aid at the behest of the British.

18 NOVEMBER • Dominican Republic President Joaquín Balaguer declared a state of emergency following the return to that country of Héctor and José Trujillo, brothers of assassinated President (Gen.) Rafael Trujillo. *Franklin D. Roosevelt* (CVA 42) subsequently reinforced the Caribbean Ready Amphibious Squadron off the nation's coast. The combined force launched flights of A4D Skyhawks and made amphibious feints from outside Dominican waters to emphasize U.S. resolve to prevent a reestablishment of a dictatorship there. The ships departed after the formation of a Dominican council of state on 19 December.

22 NOVEMBER • Lt. Col. Robert B. Robinson, USMC, broke the world speed record by averaging 1,606.3 mph in two runs in an YF4H-1 Phantom II over a 15/25-kilometer course at Edwards AFB, Calif.

25 NOVEMBER • *Enterprise* (CVAN 65), Capt. Vincent P. DePoix commanding, was commissioned at Newport News Shipbuilding and Dry Dock Co., Va., as the world's first nuclear-powered aircraft carrier.

29 NOVEMBER • Mercury-Atlas 5 launched from Cape Canaveral, Fla. The suborbital mission obtained physiological and performance data during ballistic flight on the occupant, a chimpanzee named Enos. A helicopter from Marine Aircraft Group 26, embarked on board *Lake Champlain* (CVS 39), together with destroyer *Stormes* (DD 780) recovered the capsule in the Atlantic. Dock landing ship *Fort Mandan* (LSD 21) was among the vessels that supported the recovery. Also on this date, NASA selected Lt. Col. John H. Glenn Jr., USMC, as the astronaut for the first manned orbital flight and Lt. Cmdr. M. Scott Carpenter as the backup pilot.



In Operation Skyburner, Lt. Col. Robert B. Robinson, USMC, breaks the absolute world speed record at 1,606.342 mph in the second YF4H-1 Phantom II, BuNo 142260, 22 November 1961.

1 DECEMBER • Capt. Bruce K. Lloyd and Cmdr. Don J. Roulstone laid claim to three new world speed records in an HSS-2 Sea King over a course along Long Island Sound between Milford and Westbrook, Conn., with performances of 182.8 mph, 179.5 mph, and 175.3 mph for 100, 500, and 1,000 kilometers, respectively.

5 DECEMBER • Cmdr. George W. Ellis surpassed the existing world record for altitude sustained in horizontal flight with a height of 66,443.8 feet in a YF4H-1 Phantom II over Edwards AFB, Calif.



NH 69961

Capt. Bruce K. Lloyd (left) and Cmdr. Don J. Roulstone break three global helicopter speed records in an HSS-2 Sea King over a course along Long Island Sound, 1 December 1961.

6 DECEMBER • Cmdr. Alan B. Shepard Jr. and Capt. Virgil I. Grissom, USAF, received new wings honoring America's first astronauts in a joint Navy–Air Force ceremony. The designs of the emblems displayed a shooting star superimposed on the traditional aviator wings of the respective services.

8 DECEMBER • The closure of the landing field at NAS Anacostia, D.C., and the termination of all approach procedures and operation of air traffic facilities ended the career of the fourth oldest air station in terms of continuous operations in the Navy.

14 DECEMBER • The completion of the installation of the Pilot Landing Aid Television (PLAT) system on *Coral Sea* (CVA 43) heralded the first carrier to have the system installed for operational use. Designers intended the system to provide a video tape of every landing for instructional purposes and the analysis of landing accidents in the promotion of safety. By early 1963, all attack carriers received PLAT and planning had begun for its installation in antisubmarine carriers and at shore stations.

29 DECEMBER • NASA issued the *Gemini Operational and Management Plan* outlining the roles and responsibilities of the Department of Defense and NASA in the Gemini space program.

30 DECEMBER • Cmdr. Patrick L. Sullivan and Capt. David A. Spurlock, USMC, bettered the existing HSS-2 Sea King three-kilometer world speed record at 199.01 mph at Windsor Locks, Conn.

1962

1 JANUARY • Three new fleet air commands were established under Commander, Naval Air Force Atlantic, one each with headquarters at Iceland, Bermuda, and in the Azores.

15 JANUARY • Through 17 January, recovery area swimmers completed training at NAS Pensacola, Fla., including jumps from a helicopter for use in the Mercury-Atlas 6 manned orbital mission.

17 JANUARY • *Enterprise* (CVAN 65) accomplished the first fleet air operations of a nuclear-powered aircraft carrier. Cmdr. George C. Talley Jr., commander of Carrier Air Group 1 from NAS Cecil Field, Fla., made an arrested landing—trap—and catapult launch in an F8U-1E of VF-62, BuNo 145375. A few minutes later, Cmdr. Joseph P. Moorner and Lt. Cmdr. Jesse J. Taylor of VF-62 landed two more Crusaders. These events marked the first of 170 catapult shots and traps over two days. On 30 October 1961, three TF-1 Traders of VR-40 took off from the ship to transport VIPs to the mainland following their observation of sea trials, but Talley's flights marked the start of *Enterprise* fleet operations.

23 JANUARY • Lt. Col. Charles E. Crew, USMC, commanding officer of VMF(AW)-451, led a flight consisting of the last of 18 F8U-2N Crusaders to complete the first transpacific mission by a Marine jet fighter squadron from MCAS El Toro, Calif., to NAS Atsugi, Japan. The Crusaders stopped at Kaneohe, Hawaii; Wake Island; and Guam; and GV-1 Hercules tankers provided aerial refueling.



NH 69960

The HSS-2 Sea King flown by Capt. Louis K. Keck, USMC (left), and Navy Lt. R. W. Crafton is the first helicopter to officially exceed 200 mph, 5 February 1962.

24 JANUARY • Two Navy F4H-1 Phantom IIs, designated F-110A by the USAF, arrived at Langley AFB, Va., for use in orientation courses prior to the assignment of Phantoms to the USAF Tactical Air Command.

26 JANUARY • To overcome deficiencies disclosed during the operations of ships equipped with surface-to-air missiles, the chief of the Bureau of Naval Weapons designated an assistant chief for surface missile systems to head a special task force and direct all aspects of surface missiles within the bureau, and to act with the Chief of Naval Personnel and the Bureau of Ships on matters involving those bureaus.

5 FEBRUARY • Navy Lt. R. W. Crafton and Capt. Louis K. Keck, USMC, flew an HSS-2 Sea King during the first officially sanctioned trial of a helicopter to exceed 200 mph. Crafton and Keck broke the 15/25-kilometer world record with a speed of 210.65 mph over a course along the Connecticut shore from Milford to New Haven.



NASA 62MA6-112

Lt. Col. John H. Glenn Jr., USMC, on board spacecraft *Friendship 7*, hurtles into space during the launch of Mercury-Atlas 6, 20 February 1962.

8 FEBRUARY • A detachment of P2V-7 Neptunes of VP-11 began ice reconnaissance flights from NAS Argentia, Newfoundland, over the Gulf of St. Lawrence to aid in evaluating satellite imagery of ice formations transmitted by Tiros 4 after the weather satellite's entry into orbit that day.

20 FEBRUARY • Lt. Col. John H. Glenn Jr., USMC, manned space capsule *Friendship 7* during the launch of Mercury-Atlas 6 from Cape Canaveral, Fla. The mission's three turns about the earth became the first U.S. manned orbital flights and accomplished the basic goals of Project Mercury—putting an astronaut into orbit, determining his ability to perform various functions during space flight, and obtaining physiological data concerning Glenn's reactions to the stresses encountered. Destroyer *Noa*



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During Project High Jump—(from left) Lt. Col. William C. McGraw, USMC; Cmdr. David M. Longton, Lt. Cmdr. Del W. Nordberg, and Lt. Cmdr. John W. Young—set multiple F4H-1 Phantom II time-to-climb records.

(DD 841) recovered Glenn and *Friendship 7* about 21 minutes after splashdown about 800 miles southeast of Bermuda near 21°26'N, 68°41'W. An HUP-3 Retriever of HU-2 Detachment 36, Aircraft No. 46, delivered Glenn to *Randolph* (CVS 15), and then a VS-26 S2F-3 Tracker flew the astronaut to Grand Turk Island in the Bahamas. Additional ships that supported the flight included *Enterprise* (CVAN 65) and *Forrestal* (CVA 59) sailing in the Atlantic and *Antietam* (CVS 36) in the Pacific. On 9 March, Glenn received his astronaut wings at the Pentagon.

21 FEBRUARY • Pilot Lt. Cmdr. John W. Young and radar intercept officer Cmdr. David M. Longton established new world time-to-climb records to 3,000 and 6,000 meters with times of 34.52 and 48.78 seconds, respectively, in an F4H-1 Phantom II at NAS Brunswick, Maine.

1 MARCH • Lt. Col. William C. McGraw, USMC, established new world time-to-climb records from a standing start to 9,000 and 12,000 meters in 61.62 and 77.15 seconds, respectively, in an F4H-1 Phantom II at NAS Brunswick, Maine.

3 MARCH • Lt. Cmdr. Del W. Nordberg broke a time-to-climb record by reaching an altitude of 15,000 meters in 114.54 seconds in an F4H-1 Phantom II at NAS Brunswick, Maine.

13 MARCH • *Midway* (CVA 41) and the Caribbean Ready Amphibious Squadron established precautionary patrols in Guatemalan waters for nine days when rioting by students led to widespread disorder in that country.

13 MARCH • NASA Administrator James E. Webb recommended to President John F. Kennedy the assignment of DX priority (the highest precedence in the procurement of critical materials) to the Apollo lunar program. The president approved the recommendation on 11 April.

31 MARCH • Lt. Cmdr. F. Taylor Brown attained a new world time-to-climb record to 20,000 meters with a time of 178.5 seconds in an F4H-1 Phantom II at NAS Point Mugu, Calif.

3 APRIL • Lt. Cmdr. John W. Young broke the Phantom II's seventh world time-to-climb record by reaching 25,000 meters in 230.44 seconds in an F4H-1 at NAS Point Mugu, Calif.

5 APRIL • NASA pilot Neil A. Armstrong flew an X-15 to a speed of 2,830 miles per hour and an altitude of 179,000 feet at Edwards AFB, Calif. The naval aviator achieved the marks during a test of an automatic control system intended for incorporation in Apollo spacecraft and the Dyna-Soar rocket-boosted hypersonic glider used in the development of a manned orbital vehicle for bombing and reconnaissance. The Dyna-Soar program was subsequently cancelled. Armstrong made seven flights in X-15s from December 1960 to July 1962, attaining a maximum speed of 3,989 mph in X-15-1 and a peak altitude of 207,500 feet in X-15-3.

12 APRIL • Lt. Cmdr. Del W. Nordberg broke a time-to-climb record by reaching an altitude of 30,000 meters in 371.43 seconds in an F4H-1 Phantom II at NAS Point Mugu, Calif.

15 APRIL • Aircraft from *Hancock* (CVA 19) provided distant cover (because of a request by the State Department to operate inconspicuously to avoid international criticism) while 24 UH-34D Seahorses of HMM-362 flew from amphibious assault ship *Princeton* (LPH 5) to Soc Trang, South Vietnam. Elements of HMM-261 assisted the landings but returned to the ship. Three OE-1 Bird Dogs of VMO-1, an R4D-8 Skytrain, and some KC-130 Hercules had already arrived. The Marines supported the Army and South Vietnamese during Operation Shufly—counterinsurgency operations against the People's Liberation Armed Forces (Viet Cong) within the Mekong Delta. The Marines subsequently recommended



Unmodified production F4H-1 Phantom IIs set a number of time-to-climb speed records during Project High Jump.

the installation of armor plate and machine guns on their helicopters, and the addition of new flight clothing and body armor for crewmembers. On 1 August, HMM-362 departed South Vietnam.

18 APRIL • NASA announced the acceptance of applications for additional astronauts until 1 June. The agency planned to select five to ten astronauts to augment the seven Mercury team members. The new pilots were to participate in support operations in Project Mercury and join the Mercury astronauts in piloting the two-man Gemini spacecraft. The requirements included



NH 69953

Alan B. Shepard Jr.



NASA 36911

John H. Glenn Jr.



NH 69951

M. Scott Carpenter



NASA 62MA724

Walter M. Schirra Jr.

experienced jet test pilots preferably engaged in flying high-performance aircraft; experimental flight test pilot status through military service, the aircraft industry, or NASA, or graduation from military test pilot schools; degree achievement in the physical or biological sciences or in engineering; U.S. citizenship under 35 years of age at the time of selection and six feet or less in height; and recommendation by their parent organizations.

30 APRIL • The Naval Air Research and Development Activities Command was disestablished, and the Bureau of Naval Weapons reassumed responsibility for the overall management and coordination of the aeronautical research and development activities in the Third and Fourth Naval Districts.

10 MAY • Up to this time, communist Pathet Lao insurgents routed Laotian royalists and advanced toward the Thai border.

On this date, President John F. Kennedy dispatched ships including *Hancock* (CVA 19), *Bennington* (CVS 20), and amphibious assault ship *Valley Forge* (LPH 8) to the Gulf of Thailand, together with 3,400 Marines supported by British, Australian, and New Zealand forces, which collectively arrived between 17 and 20 May. On 17 May, HMM-261 flew from *Valley Forge* to Udorn Royal Thai AFB, Thailand, where the squadron operated until relieved by HMM-162 in late June. The North Vietnamese consequently pressured the insurgents to accept a cease-fire, and the deployments ended in July.

10 MAY • An F4H-1 Phantom II scored a direct hit with an AAM-N-6 Sparrow III air-to-air missile in a head-on attack on a Regulus II bombardment missile while both traveled at supersonic speed over the Naval Air Missile Center Point Mugu, Calif. The achievement marked the first successful head-on attack by an air-launched weapon on a surface-launched guided missile.

22 MAY • The Navy Astronautics Group, Cmdr. James C. Quillen Jr. commanding, was established as the Navy's first space satellite command at Pacific Missile Range Headquarters, Point Mugu, Calif. One of the duties of the command included the responsibility for operating the Transit Navigational System, under Navy development for the Department of Defense.

24 MAY • Lt. Cmdr. M. Scott Carpenter manned space capsule *Aurora 7* during the launch from Cape Canaveral, Fla., of Mercury-Atlas 7, the second U.S. manned orbital flight. The capsule splashed down in the Atlantic near 19°27'N, 63°59'W, miles beyond the planned impact area northeast of Puerto Rico. The overshoot resulted from a yaw error during the firing of the retrograde rockets that put the capsule beyond radio and recovery vehicle range. Carpenter egressed from *Aurora 7* into a life raft on a sea of lazy swells, and waited until a P2V Neptune made visual contact a half hour later. A USAF SC-54 Skymaster dropped two pararescue men to assist the astronaut before an HSS-2 Sea King, Aircraft No. 57, of HS-3 embarked on board *Intrepid* (CVS 11), returned the astronaut to the carrier more than four hours after splashing down, and destroyer *John R. Pierce* (DD 753) retrieved the capsule. Additional ships involved included dock landing ships *Donner* (LSD 20) and *Spiegel Grove* (LSD 32). On 25 June Carpenter received his astronaut wings.

29 MAY • Vice Adm. Patrick N. L. Bellinger (Ret.), (Naval Aviator No. 8), died in Clifton Forge, Va. On 26 November 1912, Bellinger had reported for flight training to the Annapolis, Md., aviation camp and on 1 October 1947, he retired while serving on the General Board.

1 JUNE • The Materials Advisory Board of the National Research Council issued its final report on the titanium alloy sheet rolling program, thereby terminating the program as a formally organized effort. The achievements of the program during its six years of work included acquiring metallurgical and engineering data for a number of titanium alloys and familiarizing the aerospace industry with their properties and methods of fabrication. High strength, heat-treated sheet alloys developed under this program were subsequently used in aircraft including A-7 Corsair IIs, later model F-4 Phantom IIs, Lockheed SR-71A Blackbirds, and in deep submergence vehicles used in oceanographic research.

26 JUNE • The 1,500-mile-range Polaris A-2 became operational when submarine *Ethan Allen* (SSBN 608) sailed with 16 of the fleet ballistic missiles from NWS Charleston, S.C.

29 JUNE • A Polaris fleet ballistic missile carrying the new bullet-nose shape for use with A-3 missiles soared 1,400 miles down range from Cape Canaveral, Fla. On 7 August 1962, the first A-3 flight model successfully launched from the same base.

1 JULY • Fleet Air Patuxent and Naval Air Bases, Potomac River Naval Command were established, and assigned as additional duties to Commander Naval Air Test Center, Patuxent River, Md.

25 JULY • Following the defeat of Gen. Fulgencio Batista, Cuban leftists led by Fidel R. Castro harassed NS Guantánamo Bay, Cuba. In response to U.S. fears of an escalation to coincide with the celebration of the 26th of July Cuban revolutionary holiday, the Caribbean Ready Amphibious Squadron sailed for Guantánamo and aircraft flew demonstrations over the station until the termination of the alert on 27 July.

1 AUGUST • Squadrons of the Naval Air Reserve that had been called up during the Berlin Crisis on 1 October 1961 were released to inactive duty. The action reduced the strength of the naval air operating forces by 18 squadrons and 3,995 officers and men.

30 AUGUST • One of two Cuban GC-107-class patrol boats shot at an S-2 Tracker flying in international air space 15 nautical miles north of Cárdenas, Cuba.

31 AUGUST • The last flight of a Navy airship at NAS Lakehurst, N.J., marked the passing of an era. The flight also marked the end of a year's service by the two airships maintained in operation following the discontinuance of the lighter-than-air (LTA) program for use as airborne aerodynamics and research laboratories in the development of V/STOL aircraft and antisubmarine search systems. Cmdrs. Walter D. Ashe and Robert Shannon piloted this final flight and the passengers included LTA stalwarts Vice Adm. Charles E. Rosendahl (Ret.) and Capt. Frederick N. Klein (Ret.).

8 SEPTEMBER • Two Cuban MiG-17 Frescos overtook two S2Fs over the Caribbean, 45 miles southwest of NAS Key West, Fla. One Fresco made simulated firing runs on the Trackers, but two F4D-1 Skyrays scrambled from Key West and the MiGs disengaged.

12 SEPTEMBER • Lt. Cmdr. Donald E. Moore climbed to 29,460 feet over Floyd Bennett Field, N.Y. in a UF-2G to set a new world altitude record for amphibians carrying a 1,000-kilogram load. On the same day, Lt. Cmdr. Fred A. W. Franke Jr. piloted the Albatross to a new record for amphibians with a 2,000-kilogram load with a climb to 27,380 feet.

15 SEPTEMBER • Lt. Cmdr. Richard A. Hoffman set a new world 5,000-kilometer speed record for amphibians carrying a 1,000-kilogram load with 151.4 mph in a UF-2G Albatross on a course from Floyd Bennett Field, N.Y., to Plattsburgh, N.Y., to Dupree, S. Dak., returning to Floyd Bennett Field.

17 SEPTEMBER • At the University of Houston, Texas, NASA introduced the public to nine pilots selected to join the nation's astronaut corps: civilian test pilots and naval aviators Neil A. Armstrong and Elliott M. See Jr.; Navy Lt. Cmdrs. James A. Lovell Jr. and John W. Young; and Lt. Charles Conrad Jr.; together with Lt. Col. Frank Borman, USAF; Maj. Thomas P. Stafford, USAF; Capt. James A. McDivitt, USAF; and Capt. Edward H. White II, USAF.

NH 69960



Cmdr. Walter M. Schirra Jr. emerges from space capsule *Sigma 7* on board *Kearsarge* (CVS 33) after his six-orbit flight, 3 October 1962.

18 SEPTEMBER • A joint Army-Navy-Air Force regulation established a uniform system of designating military aircraft similar to that previously in use by the USAF. All existing aircraft received redesignations using a letter, dash, number, and letter to indicate respectively the basic mission or type of aircraft, its place in the series of that type, and its place in the series of changes in its basic design. Under the system the Crusader, formerly designated F8U-2, became the F-8C indicating the third change (C) in the eighth (8) of the fighter (F) series. A provision indicated the status of the aircraft and modifications of its basic mission by prefix letters. Thus the YF8U-1P became the YRF-8A symbolizing a prototype (Y) of the photoreconnaissance (R) modification of the F-8A.

19 SEPTEMBER • During growing tensions with the Cubans, six F-8D Crusaders deployed for defensive duties with the USAF in the North American Air Defense Command to NAS Key West, Fla.

28 SEPTEMBER • A Navy flight photographed Soviet freighter *Kasimov* en route to Cuban waters with ten crated

Ilyushin Il-28s on her deck. The Soviets eventually deployed at least 42 of the Beagles, which were capable of carrying nuclear weapons, to Cuba.

1 OCTOBER • On the eve of the Cuban Missile Crisis, the Atlantic Fleet included *Essex* (CVS 9), *Wasp* (CVS 18), and *Lake Champlain* (CVS 39), in the area of Boston, Mass., and Newport, R.I.; *Intrepid* (CVS 11) off New York City, N.Y.; *Randolph* (CVS 15) at NS Norfolk, Va.; *Shangri-La* (CVA 38) at NS Mayport, Fla.; amphibious assault ships *Okinawa* (LPH 3), *Boxer* (LPH 4), and *Thetis Bay* (LPH 6) at Norfolk; and cruiser *Canberra* (CAG 2) at NS Guantánamo Bay, Cuba.

3 OCTOBER • Cmdr. Walter M. Schirra Jr. piloted space capsule *Sigma 7* during the launch of Mercury-Atlas 8 from Cape Canaveral, Fla. After six orbits, the spacecraft splashed down in the Pacific 275 miles northeast of Midway Island near 32°5'N, 174°28'W, and about 9,000 yards from primary recovery ship *Kearsarge* (CVS 33). Helicopters dropped swimmers near the capsule and *Kearsarge* hoisted *Sigma 7* and Schirra on board. Additional vessels that supported the recovery included *Lake Champlain* (CVS 39) in the Atlantic. On 16 October, Schirra received his astronaut wings.

8 OCTOBER • Lt. Col. Edwin A. Harper, USMC, of VMA-225 led a flight of 16 A-4C Skyhawks on a round-trip crossing of the Atlantic between MCAS Cherry Point, N.C., and NS Rota, Spain. The Marines flew to Bermuda and then directly to Rota. After a brief layover, the flight returned on 17 October to Cherry Point by way of Lajes, Azores, and Bermuda. Ten KC-130F Hercules of VMGR-252 refueled the Skyhawks during the operation.

8 OCTOBER • The F-4B Phantom IIs of VF-41 shifted from NAS Oceana, Va., to NAS Key West, Fla., to augment a

detachment of six F-8D Crusaders for defensive duties with the USAF in the North American Air Defense Command during growing tensions with Cuba.

14 OCTOBER • During the preceding months, Soviet Premier Nikita S. Khrushchev grew concerned over the imbalance in the nuclear arsenals of the rival superpowers and launched Operation Anadyr—the infiltration into Cuba of surface-to-surface missiles capable of being fitted with nuclear warheads to expand Soviet options, and to demonstrate to the Americans their inability to halt the advance of Soviet power in proximity to the United States. Cuban leader Fidel R. Castro agreed to the plan. On this date, Maj. Richard D. Heyser, USAF, piloted CIA high-altitude reconnaissance Mission 3101 over western Cuba in a Lockheed U-2F, designated Article 342, and detected Soviet SS-4 (R-12) Sandal medium-range ballistic missile (MRBM) launchers. Navy specialists processed the film and then delivered it for evaluation to the National Photographic Interpretation Center, Washington, D.C. Additional reconnaissance missions and intelligence data revealed more MRBMs and SS-5 (R-14) Slean intermediate-range ballistic missiles. The discovery of the Soviet deception precipitated the Cuban Missile Crisis because President John F. Kennedy and his advisors considered such a threat to the United States as unacceptable.

16 OCTOBER • Chief of Naval Operations directed the conversion of some RH-46As to aerial minesweepers for use in a mine countermeasures development and training program and eventual assignment to fleet squadrons. The program later substituted RH-3As for the conversion.

17 OCTOBER • Operation Blue Moon—low-level reconnaissance flights over Cuba to help verify Soviet military deployments to that country—became operational. VFP-62 initially prepared ten photo variant RF-8A Crusaders with aerial cameras for high-speed, low-level photo missions, and placed four of the jets on a four-hour alert at NAS Cecil Field, Fla., but subsequently shifted the Crusaders to NAS Key West, Fla. The squadron maintained ten operational aircraft with seven standing by, and also deployed five detachments on board attack carriers operating in the Atlantic and Mediterranean during the Cuban Missile Crisis.

19 OCTOBER • Operational units began moving to stations in Florida to counter the threat posed by Soviet missiles and bombers in Cuba. Aircraft and squadrons there not required for air defense, reconnaissance, and antisubmarine patrols began relocating to prevent overcrowding. About 350 naval aircraft operated ashore in that region including 7 fighters, 12 bombers, and 5 maritime patrol aircraft at NS Guantánamo Bay, Cuba; 18 fighters at Homestead AFB, Fla.; 76 fighters, 57 attack, and 10 patrol aircraft at NAS Jacksonville, Fla.; 26 fighters and 5 antisubmarine planes at NAS Key West, Fla.; 12 EC-121K Constellations at McCoy AFB, Fla.; 15 patrol aircraft at NAS Roosevelt Roads, P.R.; and 11 A-5A Vigilantes of VAH-7 at NAS Sanford, Fla. By 25 October, the number of these aircraft ashore rose to 448 fighters and bombers and 67 reconnaissance and support types.

19 OCTOBER • *Enterprise* (CVAN 65) sortied in response to the Cuban Missile Crisis from NS Norfolk, Va. The emergency compelled the ship to sail with only some aircraft and the balance flew on board as she passed Cape Henry. The Atlantic Fleet provided the cover story that engineering exercises and Hurricane Ella off the southeastern coast of the U.S. imposed the rapid departure. Aircraft flew a daily average of 120 sorties from *Enterprise* during the crisis. The ship returned on 7 December.

20 OCTOBER • The Cuban Missile Crisis coincided with a routine training event designated PHIBBRIGLEX 62 (Quick Kick)—an amphibious brigade landing exercise. More than 40 ships, including *Independence* (CVA 62), *Randolph* (CVS 15), and amphibious assault ships *Okinawa* (LPH 3) and *Thetis Bay* (LPH 6), were scheduled to take part by November. On this date, the Atlantic Fleet publicly used the excuse that Hurricane Ella scattered ships to begin to reassign these forces to respond to the crisis.

20 OCTOBER • Commander in Chief Atlantic Fleet Adm. Robert L. Dennison ordered the A-5A Vigilantes of VAH-7 to transfer from *Enterprise* (CVAN 65) to NAS Sanford, Fla. Twenty-one A-4C Skyhawks of VMA-225 from MCAS Cherry Point, N.C., replaced them on board because they were more suitable for close air support. Cargo aircraft carried maintenance teams and equipment from ashore. On 5 December, these A-4Cs completed the first Marine squadron operations from a nuclear-powered carrier. In addition, *Enterprise* received orders to steam near 25°N,

1962 continued

75°W, and *Independence* (CVA 62) toward 23°10'N, 72°24'W. The next morning the carriers rendezvoused north of the Bahamas.

22 OCTOBER • Intelligence data that unveiled Soviet progress in Cuba and the transfer of arms via Eastern Bloc ships en route to the island prompted the Joint Chiefs to raise the U.S. defense posture from Defense Condition 5 to 3 for all forces worldwide at 1800 EDT—excluding forces in Europe that went to a precautionary stance. The Joint Chiefs of Staff issued the order prior to a televised speech by President John F. Kennedy. The president announced “unmistakable evidence” of the Soviet intrusion into Cuba and emphasized three strategic points: the imposition of a quarantine on all offensive military equipment en route to Cuba effective at 1000 EDT on 24 October; the continuation and increase of the close surveillance of Cuba; and a policy to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviets on the United States. During the speech, submarines equipped with Polaris fleet ballistic missiles moved to their launch stations to supplement silo-launched intercontinental ballistic missiles and Strategic Air Command bombers.

23 OCTOBER • The first of three pairs of RF-8As of VFP-62 flew the initial mission of Operation Blue Moon—low-level reconnaissance flights over Cuba. Cmdr. William B. Ecker, squadron commanding officer, and Lt. C. Bruce Wilhelmy piloted two camera-equipped Crusaders during the flight from NAS Key West, Fla., over San Cristóbal. The jets completed the mission undamaged; however, Ecker received orders to personally brief at the Pentagon Chairman of the Joint Chiefs Gen. Maxwell D. Taylor, USA, Chief of Naval Operations Adm. George W. Anderson Jr., and Air Force Chief of Staff Gen. Curtis E. LeMay. Four RF-8As from VMCJ-2 together with USAF McDonnell RF-101C Voodoos and Douglas RB-66 Destroyers subsequently reinforced Blue Moon. Twelve sailors including Ecker and Wilhelmy and four Marines received the Distinguished Flying Cross. Through 15 November, aircraft of all the services made 158 low-level photo runs over Cuba.

24 OCTOBER • The blockade of Soviet offensive weapons into Cuba began. Task Force 136, Commander Second Fleet Vice Adm. Alfred G. Ward commanding, established

patrol positions in a line designated Walnut to the east of Cuba beyond the known range of Soviet Ilyushin Il-28 Beagles flying from the island. Task Group 136.2, comprising at times *Essex* (CVS 9), *Randolph* (CVS 15), and *Wasp* (CVS 18), provided the principal operating forces. *Essex* operated 22 S-2D Trackers of VS-34 and -39, 14 SH-3A Sea Kings of HS-9, and one E-1B Tracer of VAW-12 Detachment 9. Eleven P-5B Marlins each of VP-45 and -49 of Task Group 81.5 patrolled to the north and east of 25°N, 65°W, and 11 P-2E Neptunes of VP-5 of Task Group 81.7 patrolled east of the quarantine line and south of 25°N. These planes proved crucial to the detection of Eastern Bloc ships and the verification of their cargoes. Commander in Chief Atlantic Fleet Adm. Robert L. Dennison later redesignated the blockade line Chestnut, moving the perimeter closer to Cuba to reduce the number of ships at sea.

24 OCTOBER • Commander NS Guantánamo Bay Rear Adm. Edward J. O'Donnell requested that Task Force 135 including *Enterprise* (CVAN 65) and *Independence* (CVA 62) alternate continuous early warning patrols over the Windward Passage and cover the U.S. enclave from a Cuban attack. *Enterprise* and *Independence* operated south of the Windward Passage between Cuba and Hispaniola and southward. Fleet Air Wing 11 and Marine Aircraft Group 26 deployed to NS Roosevelt Roads at Puerto Rico and to NS Guantánamo Bay, respectively, also supported these ships. Soviet threats against carriers sailing in Caribbean waters included four Foxtrot (Project 641)-class submarines, 3R9/10 Luna (Free Rocket Over Ground or FROG-3/5) tactical surface-to-surface rockets, FKR (*frontoviyе krilatiye raketi*—frontal rocket) 1 Metors (SSC-2A Salishes), 12 P-6 Komar (Project 183-R)-class missile boats, up to 42 Ilyushin Il-28 Beagles, and MiG-21F Fishbed-Cs. Many of these were capable of being fitted with nuclear warheads.

24 OCTOBER • The P-2H Neptunes of VP-11 deployed to Argentina, Newfoundland, on 12 hours notice in response to the Cuban Missile Crisis. The squadron's planes completed 1,065 flying hours of surveillance flights through 14 November 1962.

27 OCTOBER • Senior Soviet commander in Cuba Gen. Issa A. Pliyev informed his superiors in Moscow that the SS-4 (R-12) Sandal medium-range ballistic missiles there had

become operational, despite heavy rain that delayed the completion of the final site. Pliyev stated his capability to send two salvoes of 36 missiles against the United States.

27 OCTOBER • Amphibious assault ship *Boxer* (LPH 4) embarked 20 UH-34D Seahorses of HMM-263, four CH-37C Mojaves, five OH-43Ds, and nine O-1 Bird Dogs at New River, N.C. The ship deployed with an additional 16 Seahorses to reinforce HMM-261 and -264, operating from amphibious assault ships *Okinawa* (LPH 3) and *Thetis Bay* (LPH 6), respectively, and sailed for Caribbean waters in response to the Cuban Missile Crisis. Also on this date, *Iwo Jima* (LPH 2) embarked HMM-361 and a detachment of VMO-6 and sailed from the Pacific Fleet via the Panama Canal, reaching the Caribbean in two weeks.

28 OCTOBER • Soviet Premier Nikita S. Khrushchëv accepted U.S. diplomatic overtures to end the Cuban Missile Crisis. Cuban leader Fidel R. Castro initially rejected the U.S. offer but subsequently consented to the agreement.

31 OCTOBER • Geodetic satellite Anna entered orbit from Cape Canaveral, Fla. The Department of Defense developed Anna under Bureau of Naval Weapons management. The satellite contained three independent sets of instrumentation to validate measurements taken by organizations participating in the Anna worldwide geodetic research and mapping program.

31 OCTOBER • By this point during the Cuban Missile Crisis, *Enterprise* (CVAN 65) steamed in a box within 60 miles of 18°N, 80°W.

5 NOVEMBER • Two MiG-21F Fishbeds attacked the two RF-8As Crusaders of VFP-62 comprising Flight 16 flying an Operation Blue Moon low-level reconnaissance mission eight miles west of Santa Clara, Cuba. The Crusaders turned and rolled into the MiGs for a head-on approach, then hit their afterburners and escaped six miles east of their point of entry over Cuba—the MiGs pursued for five minutes. The high combat air patrol observed the action but failed to intervene in time.

5 NOVEMBER • Two Marine helicopter squadrons began a transition training program in which 500 Marine aviators qualified in fixed-wing aircraft were to be trained to operate

helicopters. The need for the special program arose from the increased proportion of helicopters in the Marine Corps together with an overall shortage of pilots and the inability of the Naval Air Training Command to absorb the additional training load within the time allotted.

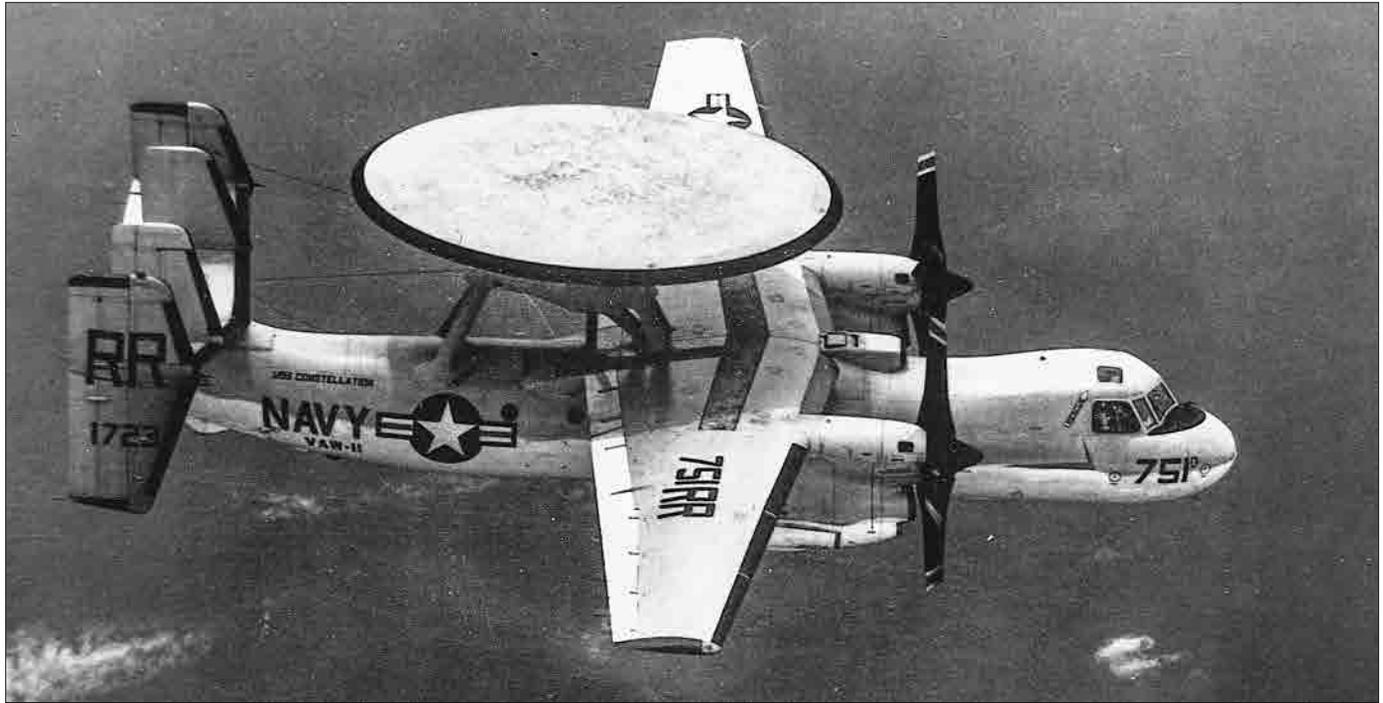
15 NOVEMBER • To date, naval aircraft flew 9,000 sorties during the Cuban Missile Crisis. Sixty-eight squadrons comprising 19,000 sailors participated, and each of the eight deployed carriers steamed at least 10,000 miles.

16 NOVEMBER • *Enterprise* (CVAN 65) and *Independence* (CVA 62) operated to 21 November in a rectangle formed by 18°10'N, 19°30'N, 77°W, and 80°W in response to the Cuban Missile Crisis. During this period the A-4C Skyhawks of VA-34 switched places with the Skyhawks of VA-64 from *Enterprise* onto *Independence*, and VA-64 embarked on board *Enterprise*. Helicopters lifted the balance of the men between the carriers.

16 NOVEMBER • *Saratoga* (CVA 60) began the Cuban Missile Crisis in overhaul at Norfolk Naval Shipyard, Va. On this date, she sailed 15 days ahead of schedule, and on 5 December relieved *Enterprise* (CVAN 65).

20 NOVEMBER • The Atlantic Fleet received direction to discontinue operations concerning the Cuban Missile Crisis, lift the quarantine, and return commands to normal tasks. The Soviets began to stand down their alerted forces. Through 20 December, *Enterprise* (CVAN 65) supported the defense of NS Guantánamo Bay, Cuba. A second carrier was to be ready in the Norfolk, Va., to Mayport, Fla., area against the requirement for sighting Soviet ships sailing from Cuban ports with Ilyushin Il-28 Beagles, and to support air strikes against Soviet and Cuban forces in Cuba in the event of an escalation of the crisis. By 2 December amphibious assault ships *Boxer* (LPH 4), *Okinawa* (LPH 3), and *Thetis Bay* (LPH 6) had returned to Norfolk. In addition, on 1 December *Iwo Jima* (LPH 2) sailed for the Pacific.

30 NOVEMBER • The Bureau of Naval Weapons issued a contract to Bell Aerosystems Company for the construction and flight test of two vertical takeoff and landing (VTOL) research aircraft with dual tandem-ducted propellers. The tri-service VTOL program thereby underwent expansion to include a tilting duct craft for development under Navy



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An E-2A Hawkeye airborne early warning aircraft of VAW-11 operates from *Constellation* (CVA 64) in 1966.

administration in addition to the tilting wing XC-142 and the tilting engine X-19A—both administered by the USAF.

1 DECEMBER • Fleet Air Caribbean and Naval Air Bases, Tenth Naval District, were established and assigned as additional duties to Commander, Caribbean Sea Frontier.

4 DECEMBER • The landing apparatus for the Apollo spacecraft failed during the first test of the program's main parachute system at NAF El Centro, Calif. One parachute failed to inflate fully, another disreefed prematurely, and the disreefing and inflation of the third canopy incurred a delay. The system experienced repeated malfunctions during subsequent testing before its final acceptance in the mid-1960s.

11 DECEMBER • The Department of Defense established a uniform system of designating, redesignating, and naming military rockets and guided missiles with combat or combat-related missions. Each new designation consisted of a combination of eight significant letters and numbers, in sequence of listing: status prefix symbol, launch environment symbol, mission symbol, type symbol, design number, series symbol, manufacturer's [two-letter] code, and serial number.

14 DECEMBER • The Naval Air Material Center at NAS Lakehurst, N.J., was renamed the Naval Air Engineering Center.

15 DECEMBER • In response to the Cuban Missile Crisis, *Enterprise* (CVAN 65) received orders to relieve *Lexington* (CVS 16), which had just completed her conversion from an attack to an antisubmarine carrier but still embarked fighters and bombers. From 30 November, *Lexington* had stayed in the United States on call for the crisis, but because of the conclusion of the confrontation, *Enterprise* did not return to war stations before the New Year.

18 DECEMBER • A four-stage Blue Scout missile launched Navy prototype operational navigation satellite Transit 5A into a polar orbit from Naval Missile Facility Point Arguello, Calif. The satellite's radio failed after 20 hours in orbit and prevented its use for navigation purposes, but certain secondary experiments proved successful.

19 DECEMBER • Lt. Cmdr. Lee M. Ramsey piloting an E-2A Hawkeye catapulted from *Enterprise* (CVAN 65) in the first shipboard test of nose tow gear designed to replace the catapult bridle and reduce launching intervals. A few minutes later Intruder No. 8, a YA-6A, BuNo 148618, followed Ramsey.

1963

7 JANUARY • Helicopters from cruiser *Springfield* (CLG 7), NAS Port Lyautey, Morocco, and NS Rota, Spain, flew rescue and relief missions in the flooded areas of the Beth and Sebou Rivers in Morocco. Through 13 January, the aircraft delivered more than 45,000 pounds of food, medicine, and emergency supplies, and lifted 320 marooned people to safety.

21 JANUARY • Secretary of Defense Robert S. McNamara and NASA Administrator James E. Webb concluded a policy agreement defining the roles of the Department of Defense and NASA in Project Gemini. The agreement provided for the establishment of a joint Gemini Program Planning Board to plan experiments, conduct flight tests, and analyze and disseminate results.

29 JANUARY • A YA-4B released a Walleye television-guided air-to-surface glide bomb that made a direct impact on its target in the first demonstration of the system's automatic homing feature at NOTS China Lake, Calif.

9 FEBRUARY • The Secretary of the Navy approved with minor modification the recommendations of his Advisory Committee on the Review of the Management of the Department of the Navy, commonly known as the Dillon Board for its chairman John H. Dillon. The approval set into motion a series of changes in the lines of authority and responsibility for implementation during the year primarily outlined in a general order issued on 1 July 1963.

22 FEBRUARY • Cmdr. William H. Everett of VX-6 piloted an LC-130F Hercules in the longest Antarctic flight to date. Everett's flight covered 3,470 miles from McMurdo Station south beyond the South Pole to the Shackleton Mountain Range, and then to the pole of inaccessibility—the point on the Antarctic continent most distant from the Southern Ocean—returning to McMurdo in a total time of 10 hours, 40 minutes.



An inert Walleye television-guided air-to-surface glide bomb with string tufts attached to its aft section is mounted on an A-6 Intruder for aerodynamic testing.

25 FEBRUARY • The United States restarted the transmitter in the Navy-developed Solar Radiation I satellite after 22 months of silence. On 22 June 1960, a Thor Able-Star missile had launched the 42-pound satellite with Transit 2A in the first of the pickaback firings. The device provided detailed data on solar storms for eight months before magnetic drag reduced the satellite's spin to a level too low for useful scanning of the sun. The satellite was shut down on 18 April 1961.

8 MARCH • The Department of Defense and NASA announced an agreement establishing working arrangements concerning the non-military applications of the Transit navigation satellite system. NASA assumed responsibility for determining the suitability of Transit equipment for nonmilitary purposes, while the Navy retained its responsibility for overall technical direction, and for research and development as necessary.

APRIL • Communist Pathet Lao insurgents inflicted a defeat on the royalist and neutral factions within Laos. At times, the Seventh Fleet deployed *Ranger* (CVA 61) and *Ticonderoga* (CVA 14) to the area. The signature of a cease fire later in the month enabled the carriers to depart on 5 May.



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With a centrifuge capable of producing accelerations up to 40g's and used for training the Mercury 7 astronauts, NADC Johnsville officially opened on 17 June 1952.

1 APRIL • To bring their title in line with their functions, replacement air groups (RAG) were redesignated combat readiness air groups (CRAG).

8 MAY • The USAF announced the addition of two squadrons of A-1Es to the 1st Air Commando Group at Hurlburt AFB, Fla. This decision followed field tests of two Skyraiders loaned by the Navy in mid-1962, and led in May 1964 to a further assessment released by the Secretary of the Air Force to deploy 75 Skyraiders to South Vietnam as replacements for B-26 Invaders and T-28 Trojans.

16 MAY • Capt. L. Gordon Cooper Jr., USAF, piloted space capsule *Faith 7* during the launch of Mercury-Atlas 9 from

Cape Canaveral, Fla. *Faith 7* splashed down in the Pacific about 80 miles southeast of Midway Island, near 27°20'N, 176°26'W. After more than 34 hours and 22 orbits, the capsule impacted within 7,000 yards of primary recovery ship *Kearsarge* (CVS 33), which retrieved the spacecraft and the astronaut. Additional ships that supported the operation included *Wasp* (CVS 18) in the Atlantic.

12 JUNE • During testimony before the Senate Space Committee, NASA Administrator James E. Webb announced the conclusion of Project Mercury to focus resources on the Gemini and Apollo space programs.

13 JUNE • Lt. Cmdrs. Randall K. Billings and Robert S. Chew Jr., of NATC Patuxent River, Md., in an F-4A Phantom II and an F8D Crusader, respectively, made the first fully automatic carrier landings with production equipment on board *Midway* (CVA 41) off the coast of California. The pilots completed the landings “hands off” with both flight controls and throttles operated automatically by signals from the ship. The event highlighted almost ten years of research and development and followed by about six years the first such carrier landing made with test equipment.

20 JUNE • Pilot and instructor Lt. Phillip H. Flood and student Ens. Arnold J. Hupp of VT-31 marked the end of P-5s in the flight training program when they completed the last student training flight in a Marlin at NAS Corpus Christi, Texas.

29 JUNE • Fleet Air Wing 10 was established at NAS Moffett Field, Calif., Capt. John B. Honan commanding.

1 JULY • General Order No. 5 set forth new policies and principles governing the organization and administration of the Navy and directed their progressive implementation. The order redefined the principal parts of the Navy and added a Naval Military Support Establishment as a fourth part under a Chief of Naval Material, which was responsible directly to the Secretary of the Navy, and with command responsibilities over the four material bureaus and major project managers and an overall task of providing material support to the operating forces.

9 JULY • The Gemini Phase I Centrifuge Program began at the Naval Air Development Center Johnsville, Pa. The Aviation Medical Acceleration Laboratory centrifuge simulated the position of the command pilot in the Gemini spacecraft. The engineering evaluation concluded on 2 August and pilot familiarization occurred between 16 July and 17 August.

15 JULY • NASA’s Manned Spacecraft Center announced it had received 271 applications for the astronaut program. Military applicants numbered 71—34 Navy, ten Marine, 26 Air Force, and one Army. Women comprised three of the 200 civilian aspirants.

1 AUGUST • VMF(AW) squadrons equipped with F-4B Phantom IIs were redesignated VMFA.

2 AUGUST • Lt. Roger Bellnap piloted an F-3B during the first of a series of five planned space probes designed to measure the ultraviolet radiation of the stars. The Demon launched a two-stage, solid-propellant Sparoair from a nearly vertical attitude at 30,000 feet over the Pacific Missile Range, and the probe reached a peak altitude of 66 miles.

23 AUGUST • Cmdr. John F. Barlow of VAH-11 piloted an A-3B Skywarrior in a joint Weather Bureau–Navy project entitled Stormfury, seeding Hurricane Beulah with silver iodide particles over a period of two days in an experiment to determine the potential of changing the energy patterns of large storms. The seedings the following day appeared to have some effect, but the indefinite results precluded firm conclusions.

6 SEPTEMBER • Five SH-3A Sea Kings of HS-9 operating from NAS Quonset Point, R.I., rescued 28 workmen from two offshore oil drilling platforms shaken by gales and heavy seas off Cape Cod, Mass.

8 SEPTEMBER • The 16 NASA astronauts selected for the manned space program began training in water and land parachute landings. The possibility of low-level aborts below 70,000 feet requiring the pilots to eject from the spacecraft drove the training. A towed 24-foot diameter parasail carried the men to altitudes up to 400 feet before the release of the towline enabled the astronauts to glide to their landings.

18 SEPTEMBER • To provide the continuing action necessary for effective management of the inactive aircraft inventory, an informal review board was established with representation from the Chief of Naval Operations, Bureau of Naval Weapons, Aviation Supply Office, and the storage facility at Litchfield Park, Arizona. The board was to review the aircraft inventory at least every six months for the purpose of recommending the retention or disposal of specific models.

18 OCTOBER • NASA announced the selection of 14 additional astronauts including five naval aviators—Lt. Cmdrs. Richard F. Gordon Jr. and Roger B. Chaffee, Lts. Alan L. Bean and Eugene A. Cernan, and Capt. Clifton C. Williams, USMC.

25 OCTOBER • After nearly two weeks of relief operations in the wake of Hurricane Flora, Navy ships began to sail from Port-au-Prince, Haiti. Four vessels, including *Lake Champlain* (CVS 39) and amphibious assault ship *Thetis*

1964

Bay (LPH 6), aided by Navy and Marine cargo aircraft flying from East Coast stations, delivered nearly 375 tons of food, clothing, and medical supplies donated by relief agencies.

26 OCTOBER • Submarine *Andrew Jackson* (SSBN 619) completed the first underwater launch of a Polaris A-3 fleet ballistic missile from a position about 30 miles off Cape Canaveral, Fla.

30 OCTOBER • Pilot Lt. James H. Flatley III and copilot Lt. Cmdr. Walter W. Stovall of NATC Patuxent River, Md., and flight engineer AD1 Ed Brennan of VR-1 completed the first of three separate shipboard evaluations of a Marine KC-130F, BuNo 149798, on board *Forrestal* (CVA 59). At times Lockheed-Marietta test pilot Ted H. Limmer Jr. joined the crew of the Hercules. Flatley made a total of 29 touch-and-go landings and 21 full-stop landings and takeoffs on this date and 8, 21, and 22 November. He later received the Distinguished Flying Cross. The Navy concluded that C-130s could carry 25,000 pounds of cargo and people 2,500 miles and land on a carrier, but considered the large planes too risky for use in COD operations.

12 NOVEMBER • Fifteen astronauts commenced a helicopter flight familiarization program at NAS Ellyson Field, Fla., as a phase of their training for lunar landings. The Navy instituted the program at the request of NASA to simulate the operation of the Project Apollo Lunar Excursion Module. The training consisted of a series of two-week courses for two students, with the final pair completing the program on 1 April 1964.

30 NOVEMBER • Secretary of Defense Paul H. Nitze approved the use of funds effective on 1 July 1964 for the purpose of placing naval aviation observers in the same pay status as pilots.

2 DECEMBER • The Chief of Naval Material reported to the Secretary of the Navy for duty as his assistant for Naval Material Support and assumed supervision and command of the four material bureaus: Naval Weapons, Ships, Supplies and Accounts, and Yards and Docks.

6 DECEMBER • A Thor Able-Star missile launched Transit SBN-2 into polar orbit from Vandenberg AFB, Calif. The

launch marked the first operational status of a navigation satellite, providing data for use by ships and submarines.

16 DECEMBER • Phase I of the Apollo Manned Centrifuge Program began at the Navy Aerospace Medical Acceleration Laboratory, Philadelphia, Pa. The testing revealed interface problems between the couch, suit, and astronaut, and concluded on 15 January 1964.

20 DECEMBER • Carrier air groups (CVG) were redesignated carrier air wings (CVW).

21 DECEMBER • *Saratoga* (CVA 60), while moored at NS Mayport, Fla., began to receive weather pictures from weather satellite Tiros 8. This began an operational investigation of shipborne readout equipment in which *Saratoga* continued to receive test readings from Tiros 8 in port and at sea through May 1964 and, in September 1964, from experimental weather satellite Nimbus.

1964

1 JANUARY • Fleet Air Wings, Pacific, was established, Rear Adm. David J. Welsh commanding.

1 JANUARY • *Duxbury Bay* (AVP 38), *Greenwich Bay* (AVP 41), and *Valcour* (AVP 55) were transferred to Cruiser-Destroyer Force Atlantic. The employment of these last three seaplane tenders in service under Commander, Naval Air, Atlantic, had been secondary to their use as flagships for Commander, Middle East Force, for several years, but this transfer completed the phase-out of patrol seaplane operations in the Atlantic Fleet.

15 JANUARY • Fleet Air Southwest Pacific and Fleet Air Japan were disestablished.

15 JANUARY • Carrier Division 15, 17, and 19 were redesignated Anti-Submarine Warfare Group 1, 3, and 5, respectively, and transferred from Commander, Naval Air, Pacific to Commander, Anti-Submarine Warfare Force, Pacific for administrative control. The new groups' mission was the development of antisubmarine carrier

group tactics, doctrine, and operating procedures including coordination with patrol aircraft operations.

17 FEBRUARY • The Office of Anti-Submarine Warfare Programs was established under Chief of Naval Operations to exercise centralized supervision and coordination of all antisubmarine warfare planning, programming, and appraising.



The P-3A Orion antisubmarine patrol plane is a derivative of the Lockheed L-188 Electra passenger airliner.

28 FEBRUARY • During combat store ship *Mars* (AFS 1) shakedown cruise off San Diego, Calif., Cmdr. Dale W. Fisher of HU-1 piloted the first helicopter to land on her deck. Discussions and testing of the concept of vertical replenishment at sea began in 1959 and certain supply ships had received helicopter platforms, but the commissioning of *Mars* provided the first genuine opportunity to incorporate helicopters into the fleet logistic support system.

9 MARCH • The David Taylor Model Basin Aerodynamics Laboratory commemorated the 50th anniversary of its establishment. The laboratory had been created at the Washington Navy Yard, D.C., but in 1944 shifted to Carderock, Md. Aerodynamics authority Capt. Walter S. Diehl (Ret.) received a citation for his contributions to the laboratory's work.

13 MARCH • Heavy attack squadrons (VAH) 3, 5, and 9 were redesignated reconnaissance attack squadrons (RVAH). In addition, VAH-1 was redesignated RVAH-1 on 1 September 1964. The decision also marked the assignment of RA-5C Vigilantes to RVAHs.

23 MARCH • Two VMO-1 OH-43Ds rescued 11 ill and injured members of a road engineering party that had escaped attacks by hostile natives in the dense jungle of the Amazon basin near Iquitos, Peru. Amphibious assault ship *Guadalcanal* (LPH 7) transferred the Marine aircraft ashore in the Panama Canal Zone, and a USAF C-130 Hercules airlifted the helicopters to Iquitos.

28 MARCH • An earthquake of such force that seismic experts identified the incident as a megathrust earthquake rocked Alaska. The quake and consequent tsunamis along the Pacific coast from Alaska to Oregon devastated Anchorage, killing at least 131 people. Within five hours, seaplane tender *Salisbury Sound* (AV 13) sailed from NAS Whidbey Island, Wash., to provide 14 days of power and heat to severely damaged NS Kodiak. Crewmembers also helped victims ashore. In addition, P-3A Orions and C-54 Skymasters deployed from NAS Moffett Field, Calif., transported emergency supplies.

19 APRIL • After an abortive rightist coup against the Laotian government, the communist Pathet Lao launched a series of raids targeting royalist outposts on the Plaine Des Jarres. *Kitty Hawk* (CVA 63) steamed to a position in the South China Sea and, on 18 May, her aircraft began to fly low-level reconnaissance missions over Laos. Three days later, the Navy also initiated a standing carrier presence at Point Yankee, later redesignated Yankee Station—the northernmost area in the Gulf of Tonkin from which carriers operated during the fighting in Southeast Asia. During 130 low-level sorties over the country through 8 June, these aircraft provided verifiable evidence of the North Vietnamese infiltration into Laos.

23 APRIL • The Chief of Naval Operations broadened the opportunities for naval aviators to qualify as helicopter pilots by extending the responsibilities for their transition training to commands outside the Flight Training Command.

1 MAY • Capt. Paul L. Ruehrmund of VX-1 completed an 18-day, 26,550-nautical-mile trans-global flight piloting a P-3A Orion to NAS Key West, Fla. On an overwater leg of the flight the aircraft dropped explosive sound devices to assist scientists from Naval Ordnance Laboratory in their study of the sea's acoustical properties as a medium for long distance sound transmission.

2 MAY • People's Liberation Armed Forces (Viet Cong) sappers detonated a mine against aircraft ferry *Card* (AKV 40) at Saigon, South Vietnam. The ship settled, but subsequently underwent salvage and repair.

7 MAY • The Chief of Naval Operations informed the chief of Naval Personnel of an agreement by which the Air Force and Coast Guard were to train Navy pilots in the techniques of operating HU-16 Albatross amphibious flying boats in search and rescue and requested its implementation.

6 JUNE • Pathet Lao machine gun and 37mm antiaircraft fire shot down Lt. Charles F. Klusmann of VFP-63 Detachment C, while he flew an RF-8A, BuNo 146823, from *Kitty Hawk* (CVA 63) during a reconnaissance mission about ten miles south near Xiengkhouang, east of the Plaine Des Jarres, Laos. Klusmann ejected, but incurred injuries and became the first naval aviator captured by the communists during the war in Southeast Asia. The enemy held him for 86 days before he escaped. On 1 September, an Air America (an "air proprietary" owned and operated by the CIA) Pilatus PC-6A Turbo Porter operating from Udorn Royal Thai AFB, Thailand, rescued him from Baum Long. Klusmann received the Distinguished Flying Cross.

24 JUNE • PHC Clara B. Johnson of VU-7 received the designation of aerial photographer, the first woman in the Navy with the right to wear the wings of an aircrewman.

26 JUNE • Lt. Robert V. Mayer of VX-6 completed a round-trip flight in an LC-130F Hercules from Christchurch, New Zealand, to McMurdo Sound, Antarctica, in the emergency evacuation of BU1 Bethel L. McMullen after the sailor's critical injury in a fall. Two of the transports carried a medical specialist team from NAS Quonset Point, R.I., and one Hercules stood by at Christchurch while the other made the flight.

29 JUNE • The issuance of a new specification for the color of naval aircraft changed the color scheme for patrol aircraft assigned to antisubmarine work to Gull Gray with Insignia White upper fuselage.

1 JULY • The Navy transferred the Pacific Missile Range facilities at Point Arguello, Calif., and on Kwajalein Atoll to USAF and Army command, respectively.

31 JULY • Nuclear Task Force 1 consisting of *Enterprise* (CVAN 65), cruiser *Long Beach* (CGN 9), and frigate *Bainbridge* (DLGN 25) began Operation Sea Orbit—a global circumnavigation by the world's first task force composed entirely of nuclear-powered ships. The goal was to test the ability of these vessels to maintain high speeds for a long voyage in all types of weather and seas without refueling or replenishing. The ships passed from the Mediterranean through the Strait of Gibraltar, sailed down the coast of West Africa, crossed the Indian Ocean and then the South Pacific, and transited up the east coast of South America. On 3 October, *Enterprise* and *Long Beach* arrived at NS Norfolk, Va., and *Bainbridge* reached Charleston, S.C. *Enterprise*—in coincidence with her hull number—completed the 30,216-nautical-mile global voyage in 65 days.

2 AUGUST • Three North Vietnamese motor torpedo boats attacked destroyer *Maddox* (DD 731) in the Gulf of Tonkin. The destroyer returned fire hitting all three. F-8E Crusaders from *Ticonderoga* (CVA 14) strafed all three, leaving one on fire and dead in the water. Commander in Chief Pacific Fleet Adm. Ulysses S. G. Sharp Jr. ordered destroyer *Turner Joy* (DD 951) to close *Maddox* but the North Vietnamese disengaged. On the night of 4 August, *Maddox* and *Turner Joy* detected apparent multiple radar contacts inbound. Despite heavy seas and a moonless and overcast night, lookouts on board *Turner Joy* believed they spotted two torpedo wakes. More recent analysis of the data and additional information now makes it clear that North Vietnamese naval forces did not attack *Maddox* and *Turner Joy* that night.

On 5 August, Operation Pierce Arrow began—retaliatory carrier strikes ordered by President Lyndon B. Johnson. *Constellation* (CVA 64) and *Ticonderoga* launched 64 sorties against vessels and facilities along the North Vietnamese coast at Bai Chay, Cua Hoi, Gianh River, and Lach Truong, and petroleum-oil-lubricants storage areas at Vinh. The attacks sank or damaged an



Enterprise (CVAN 65), cruiser *Long Beach* (CGN 9), and frigate *Bainbridge* (DLGN 25) complete the first global circumnavigation by nuclear-powered ships during Operation Sea Orbit, 1964.

estimated 25 vessels and destroyed petroleum stores and storage facilities. Antiaircraft fire shot down two *Constellation* aircraft over Hon Gai. Lt. j.g. Everett Alvarez Jr. of VA-144 was captured after ejecting from his A-4C, while Lt. j.g. R. C. Sather died in the crash of his VA-145 A-1H. These clashes led to the Joint Congressional Resolution of 7 August 1964, known as the Tonkin Gulf Resolution, approving the U.S. actions and escalating U.S. involvement in Southeast Asia.

15 AUGUST • President Lyndon B. Johnson announced the existence of a program to develop a counterinsurgency airplane. The Navy functioned as the designated Department of Defense development agency and selected North American Rockwell Corporation as the contractor for the construction of a prototype. The aircraft later was designated OV-10A Bronco.

29 AUGUST • Amphibious assault ship *Boxer* (LPH 4) and two dock landing ships arrived off the coast of Hispaniola to provide medical aid and helicopter evacuation to people in areas of Haiti and the Dominican Republic that had been damaged by Hurricane Cleo.

28 SEPTEMBER • Polaris A-3 fleet ballistic missiles became operational when submarine *Daniel Webster* (SSBN 626) sailed with a full load of the weapons from NWS Charleston, S.C.

30 SEPTEMBER • Three ski-equipped LC-130 Hercules of VX-6 flew individually from Melbourne, Australia; Christchurch, New Zealand; and Punta Arenas, Chile; to Williams Field, McMurdo Sound, Antarctica. The flight from Melbourne passed over the South Pole to drop a 50-pound sack of mail to a wintering party there and landed at Byrd Station before proceeding to McMurdo Sound. On 1 October, the arrival of Commander Naval Support Forces Antarctica Rear Adm. James R. Reedy on this flight marked the opening of Operation Deep Freeze 1965—the Navy's postwar support of Antarctic research.

1 OCTOBER • *Franklin* (AVT 8) became the first *Essex* (CV9)-class carrier to be labeled unfit for further service and stricken from the Naval Vessel Register.

4 NOVEMBER • Typhoon Iris caused extensive flooding in South Vietnam and Typhoon Joan followed shortly thereafter.

The two storms collectively devastated the provinces of Binh Dinh, Quang Ngai, and Quang Tri, rendering an estimated one million people homeless. On 17 November, UH-34D Seahorses of HMM-162, embarked on board amphibious assault ship *Princeton* (LPH 5), supported relief efforts when they began the delivery of 1,300 tons of food and clothing to storm victims.

26 NOVEMBER • Nine helicopters of HU-2 and four from NAS Lakehurst, N.J., assisted the Coast Guard in the rescue of 17 men from Norwegian tanker *Stolt Dagali*, after a collision with Israeli liner *Shalom* cut the tanker in two off the New Jersey coast.

14 DECEMBER • The United States began Operation Barrel Roll—ground support and interdiction missions to offset tactical disadvantages on the ground in northern Laos. The theater was later divided into zones A, B, and C (from north to south), but United States and Laotian restrictions initially limited Barrel Roll strike missions to no more than four aircraft per raid, a wait of at least three days between strikes, prohibited bombing targets within two miles of the North Vietnamese border, and forbidden to fly from Thai airfields.

17 DECEMBER • Cmdr. Theodore G. Ellyson (Naval Aviator No. 1) became the first naval officer enshrined in the National Aviation Hall of Fame, Dayton, Ohio.

1965

1 JANUARY • All naval air base commands were disestablished in accordance with the provision of general orders prescribing the organization and administration of the Navy.

12 JANUARY • The Department of Defense announced the operational use of the all-weather Transit navigation satellite system since July 1964. The complete development of the system was to consist of four satellites in polar orbit to provide a ship at the equator with a navigational fix once an hour.

19 JANUARY • Unmanned space capsule Gemini 2 launched from John F. Kennedy Space Center, Fla. The suborbital mission's objectives included an evaluation of the adequacy of the reentry module's heat protection during a

maximum heating-rate reentry. The capsule splashed down in the Atlantic within 23 miles of *Lake Champlain* (CVS 39), which recovered the spacecraft.

7 FEBRUARY • On 1 November 1964, communist People's Liberation Armed Forces (Viet Cong) insurgents attacked U.S. compounds at Bien Hoa near Saigon, South Vietnam, and on this date at Pleiku in the Central Highlands, followed three days later by an attack on Qui Nhon. From 7 through 9 and on 11 February, the United States carried out retaliatory Operations Flaming Dart I and II. *Hancock* (CVA 19), *Coral Sea* (CVA 43), and *Ranger* (CVA 61) launched strikes against military barracks and staging areas in the southern part of North Vietnam at Dong Hoi, Chanh Hoa, Chap Le, Vit Thu Lu, and Vu Con, and against port facilities at Dong Hoi.

8 FEBRUARY • The title and designation of naval aviation observer, 135X, was changed to naval flight officer, 132X, to be effective on 1 May.

6 MARCH • Cmdr. James R. Williford III piloted an SH-3A Sea King from *Hornet* (CVS 12) berthed at NAS North Island, Calif., and 15 hours, 51 minutes later landed on board *Franklin D. Roosevelt* (CVA 42) at sea off NS Mayport, Fla. The flight surpassed the existing distance record for helicopters by more than 700 miles.

8 MARCH • The Seventh Fleet landed about 3,500 Marines of the 9th Marine Amphibious Brigade including a helicopter squadron without opposition at Da Nang AB, South Vietnam. The Marines deployed to protect the airfield.

12 MARCH • Four enlisted men completed 24 days of living in a rotating room in a test conducted by the Naval School of Aviation Medicine, NAS Pensacola, Fla. The goals of the experiment included a determination of the spinning rate men could endure without discomfort, and checking procedures for conditioning the sailors for space flight.

23 MARCH • Gemini 3 space capsule *Molly Brown* crewed by Maj. Virgil I. Grissom, USAF, and Lt. Cmdr. John W. Young launched from John F. Kennedy Space Center, Fla. The major objectives of the mission included an evaluation of the Gemini spacecraft in manned orbital flight. The capsule splashed down in the Atlantic east of Bermuda

near 22°26'N, 70°51'W within 60 nautical miles of primary recovery ship *Intrepid* (CVS 11). A Coast Guard helicopter spotted the spacecraft, and pilot Lt. Cmdr. Warren H. Winchester, copilot Lt. j.g. James R. Walker, and aircrewmembers AX3 J. D. Hightower and J. A. Kerivan of HS-3 picked up Grissom and Young in SH-3A, Aircraft No. 57, and delivered them to the carrier. *Intrepid* hoisted *Molly Brown* on board and later returned the astronauts and the spacecraft to the space center.

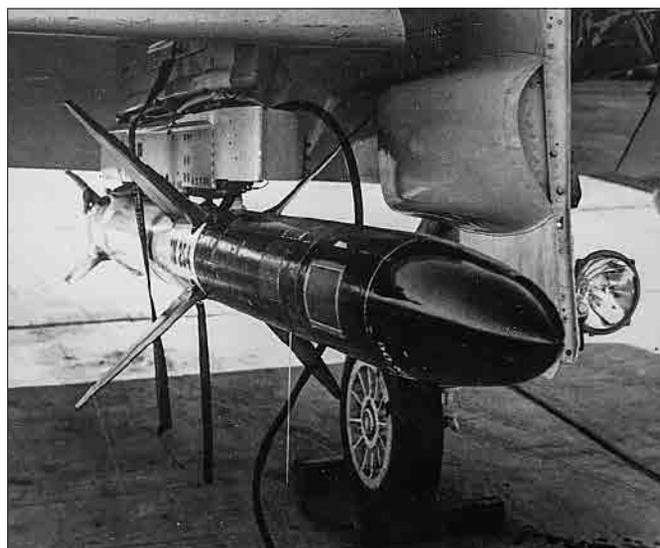
26 MARCH • Seventh Fleet aircraft began their participation in Operation Rolling Thunder—the systematic bombing of military targets throughout North Vietnam. President Lyndon B. Johnson initially directed the goals of the campaign to convince the North Vietnamese to cease their support of communist insurgents in South Vietnam, Cambodia, and Laos; however, the bombing subsequently shifted to attacks against enemy lines of communication to reduce the flood of troops and supplies into those countries. Planners numbered the raids sequentially. On this date, *Hancock* (CVA 19) and *Coral Sea* (CVA 43) launched strikes on island and coastal radar stations in the vicinity of Vinh Son, North Vietnam.

3 APRIL • The U.S. began Steel Tiger—a program to cut communist infiltration through the south-central Laotian panhandle near the North Vietnamese border and into northern South Vietnam. The harsh mountain terrain restricted vehicles to one of several passes including Ban Karai, Ban Raving, and Mu Gia, and air strikes initially focused on closing those gateways. Road watch teams on the ground alerted aircraft to targets and discerned a pattern of enemy truck shuttles. After several incidents where aircraft bombed allied Laotian troops because of communication and identification errors, orders restricted aerial attacks to “clearly identifiable” convoys, vehicles, and troops within 200 yards of either side of roads. The Steel Tiger area of operations was later divided into zones D, E, F, and G (from north to south). Allied aircraft flew a total of 43,860 Steel Tiger sorties.

10 APRIL • The deployment of Marine fixed-wing combat aircraft to South Vietnam commenced with the arrival of VMFA-531 F-4B Phantom IIs at Da Nang AB.



A C-2 Greyhound makes a carrier onboard delivery to *Kitty Hawk* (CVA 63) in Vietnamese waters.



The AGM-45 Shrike antiradar air-to-ground missile is a development of a modified AIM-7 Sparrow. The program began in 1963.

15 APRIL • Seventh Fleet carrier aircraft supported allied troops fighting in South Vietnam with a strike against People’s Liberation Armed Forces positions near Black Virgin Mountain. To carry out additional raids into the country, on 16 May 1965, the Navy established Dixie Station about 100 miles southeast of Cam Ranh Bay, South Vietnam. An average of one carrier normally operated there through 4 August 1966, when the expansion of land-based air support provided most of the required air attacks in that area. Dixie nonetheless continued to support operations across South Vietnam because the enemy did not initially develop extensive air defenses there.



4710124

A Mk 11 20mm gun pod is mounted onto an A4D-2 Skyhawk at the 1958 Naval Air Weapons Meet in El Centro, Calif., during the weapon's test phase by the Naval Aviation Ordnance Test Station in Chincoteague, Va.



NH 69956

Navy bombers firing AGM-12 Bullpup air-to-ground missiles knock down a span of the North Vietnamese highway bridge at Xom Ca Trang, 16 April 1965.

19 APRIL • Six Navy and two Marine Corps pilots emerged from two sealed chambers at the Aerospace Crew Equipment Laboratory, Philadelphia, Pa., after a 34-day test to learn the physical effects of prolonged stays in confined quarters with a low-pressure pure oxygen atmosphere.

24 APRIL • A revolt in the Dominican Republic threatened the safety of Americans there. Vessels that responded included amphibious assault ships *Okinawa* (LPH 3), *Boxer* (LPH 4), and *Guadalcanal* (LPH 7), and amphibious

transport dock *Raleigh* (LPD 1). Into mid-June, Marines established perimeters ashore while 20 HMM-264 UH-34D Seahorses and two UH-1E Iroquois flying from *Boxer*; and 20 HMM-263 Seahorses, two VMO-1 Iroquois, and two HMM-161 CH-37C Mojaves operating from *Okinawa*; proved instrumental in evacuating more than 1,000 people.

1 MAY • Through 2 May, amphibious assault ship *Iwo Jima* (LPH 2) offloaded 77 Army helicopters, about 850 soldiers, tanker trucks, and other vehicles at Vung Tau, South Vietnam.

10 MAY • Tank landing ship *Tioga County* (LST 1158) fired a surface-to-air version of an AIM-7 Sparrow III air-to-air missile designated Seaspar in the Pacific Missile Range test area, during the first shipboard test of the weapon.

12 MAY • Amphibious assault ship *Iwo Jima* (LPH 2), with HMM-161 UH-34D Seahorses embarked, supported Marines and Seabees during the establishment of an airfield capable of accommodating jets at Chu Lai, 52 miles south of Da Nang AB, South Vietnam. *Iwo Jima* then disembarked the squadron to Hué-Phu Bai and, on 12 June, sailed for Subic Bay, Philippines.

18 MAY • Members of the Naval Air Reserve began a volunteer airlift supporting operations in South Vietnam. These sailors operated Reserve C-54 Skymasters and C-118 Liftmasters carrying personnel and urgently needed cargo to the fighting on weekend and other training flights from their home stations to the West Coast, Hawaii, and Southeast Asia. These airlifts logged more than 19,000 flight hours during the first 18 months of the operation.

1 JUNE • The arrival of the first aircraft and the departure of the first combat missions opened operations at the Marine airfield at Chu Lai, South Vietnam.

3 JUNE • Gemini IV crewed by Maj. James A. McDivitt, USAF, and Maj. Edward H. White II, USAF, launched from John F. Kennedy Space Center, Fla. The major objectives of the mission included the evaluation of the performance of spacecraft systems in a long endurance flight and the effects on the crew of prolonged exposure to the space environment. On 7 June, the capsule splashed down in the Atlantic about 450 miles east of Cape Canaveral, Fla., near 27°44'N, 74°14'W.



Independence (CVA 62), her flight deck packed with aircraft, refuels during the Vietnam War.

The landing occurred off target about 48 nautical miles of primary recovery ship *Wasp* (CVS 18). Pilot Cmdr. Clarence O. Fiske, squadron commanding officer, and Navy swimmers Lt. j.g. Martin Every, Neil G. Dow, and Everett W. Owl of HS-11 manned the SH-3A Sea King that recovered the astronauts.

10 JUNE • The Naval Air Crew Equipment Laboratory began a study of several physiological aspects of pure-oxygen environments for the space program, including a determination of the possible reversal of lung collapse and the space environment effect upon the enhancement of respiratory infections. The testing concluded on 17 June.

17 JUNE • While escorting a strike against North Vietnamese barracks at Gen Phu, two F-4Bs crewed by pilot Cmdr. Louis C. Page and radar intercept officer (RIO) Lt.

John C. Smith Jr., and pilot Lt. Jack E. D. Batson Jr. and RIO Lt. Cmdr. Robert B. Doremus, of VF-21 operating from *Midway* (CVA 41), scored the first U.S. victories against MiGs during the Vietnam War. Each crew shot down one of four MiG-17 Frescoes with AIM-7 Sparrow air-to-air missiles.

17 JUNE • *Independence* (CVA 62) arrived at Subic Bay, Philippines, after a voyage from the Atlantic Fleet around the tip of Africa. *Independence* became the fifth attack carrier operating off Vietnam.

20 JUNE • Two North Vietnamese MiG-17s attacked a flight of four VA-25 A-1H Skyraiders operating from *Midway* (CVA 41) over North Vietnam. Two of the Skyraiders, piloted by Lt. Clinton B. Johnson and Lt. j.g. Charles W. Hartman III, shot down one of the Frescoes with 20mm guns. Johnson and Hartman each received the Silver Star.

1965 continued

23 JUNE • In an unusual mission for a seaplane tender, *Currituck* (AV 7) carried out a shore bombardment of People's Liberation Armed Forces positions in the Mekong Delta, South Vietnam.

30 JUNE • The Pacific extension of the Dew Line national early warning system ceased to operate seven years after its establishment, and Barrier Force, Pacific, and Airborne Early Warning Barrier Squadron, Pacific, went out of existence.

1 JULY • Fleet Air Wing 8, Capt. David C. Kendrick commanding, was established at NAS Moffett Field, Calif.

1 JULY • The Navy's first Oceanographic Air Survey Unit, Cmdr. Harold R. Hutchinson commanding, was established at NAS Patuxent River, Md. Its tasks included aerial ice reconnaissance in the North Atlantic and polar areas and Project Magnet, aerial operations concerned with worldwide magnetic collection and observation.

1 JULY • Helicopter utility squadrons (HU) were redesignated helicopter combat support squadrons (HC), and utility squadrons (VU) were redesignated fleet composite squadrons (VC), as more representative of their functions and composition.

14 JULY • *Yorktown* (CVS 10) sailed on a turnaround trip to deliver urgently needed materials to allied forces fighting in South Vietnam from San Diego, Calif., for Subic Bay, Philippines.

18 AUGUST • Marine aircraft and naval gunfire supported Operation Starlite—amphibious and heliborne landings by elements of the 3d, 4th, and 7th Marines against the People's Liberation Armed Forces (PLAF) on the Van Tuong Peninsula, 14 miles south of Chu Lai, South Vietnam. The assault drove the bulk of the PLAF's 1st Regiment from the area.

21 AUGUST • Gemini V, crewed by Maj. L. Gordon Cooper Jr., USAF, and Lt. Cmdr. Charles Conrad Jr., launched from John F. Kennedy Space Center, Fla. The major objectives of the mission included an evaluation of the rendezvous guidance and navigation system. On 29 August the capsule splashed down in the Atlantic at 29°47'N, 69°4'W. The impact occurred within 89 miles of primary recovery ship *Lake Champlain*

(CVS 39) because of incorrect navigation coordinates transmitted to the spacecraft. Navy swimmers assisted the astronauts, a helicopter returned Cooper and Conrad to *Lake Champlain*, and the ship recovered the capsule.

26 AUGUST • The barrier air patrol over the North Atlantic ended when a VW-11 EC-121J Warning Star landed at NAS Keflavik, Iceland. This also signaled a change in which a new and advanced radar system took over from naval aircraft that had maintained vigil over the northern approaches to North America for ten years.

31 AUGUST • President Lyndon B. Johnson approved a policy on the promotion and decoration of astronauts by which each military astronaut was to receive, upon the completion of his first space flight, a one-grade promotion up to and including captain in the Navy and colonel in the USAF and Marine Corps. Gemini astronauts that completed a successful space flight were to receive the NASA Medal for Exceptional Service (or cluster).

1 SEPTEMBER • In accord with the provision of an act of Congress, the Secretary of the Navy authorized additional pay to flight deck sailors for duty performed in the hazardous environment of flight operations on the decks of attack and antisubmarine carriers.

9 SEPTEMBER • Cmdr. James B. Stockdale, commander of Carrier Air Wing 16, embarked on board *Oriskany* (CVA 34), was shot down in Old Salt 352, an A-4E Skyhawk, BuNo. 151134, by automatic weapons fire after completing a Snakeye bombing attack against a group of railroad cars south of Thanh Hoa, North Vietnam. Stockdale endured captivity until his release on 12 February 1973. The naval aviator designed a prisoner communication system and a set of rules, which gave his fellow prisoners strength and hope. Vice Adm. Stockdale (Ret.) died on 5 July 2005 of Alzheimer's disease at his home in Coronado, Calif. His decorations include the Medal of Honor, two Distinguished Flying Crosses, two Purple Hearts, and four Silver Stars.

11 SEPTEMBER • Amphibious assault ship *Boxer* (LPH 4) delivered aircraft and soldiers of the Army's 1st Cavalry Division (Airmobile) to Qui Nhon, South Vietnam, after a voyage via the Suez Canal from NS Mayport, Fla.



A CH-53A Sea Stallion of HMM-361, MAG-16, delivers a 105mm field howitzer to Marines ten miles south of Chu Lai, South Vietnam, 18 August 1965.

24 SEPTEMBER • A flag officer was designated Chief of Naval Operations representative and Navy deputy to the Department of Defense Manager for Manned Space Flight Support Operations because the accelerated frequency of manned space flights placed increasing demands upon Navy recovery capabilities. The assignment comprised additional duty as Commander, Manned Space Recovery Force, Atlantic, and tasking included the coordination and consolidation of operational requirements with all of the commands providing Navy resources in support of manned space flights.

14 OCTOBER • The 1,200-nautical-mile range Polaris A-1 fleet ballistic missile was retired from service when

submarine *Abraham Lincoln* (SSBN 602) returned to the United States for overhaul and refitting with 2,500-nautical-mile range Polaris A-3s.

15 OCTOBER • To expand Pacific airlift capabilities, VR-22 shifted from NAS Norfolk, Va., to NAS Moffett Field, Calif.

17 OCTOBER • A VA-75 A-6A Intruder and four A-4E Skyhawks flying from *Independence* (CVA 62) knocked out a North Vietnamese surface-to-air missile site near Kep during the first successful naval air strike against air defense missiles in that country.

25 OCTOBER • The ships that supported the planned launch of Capt. Walter M. Schirra Jr. and Maj. Thomas P. Stafford, USAF, in Gemini VI included *Wasp* (CVS 18) in the Atlantic. NASA scrubbed the mission because of the catastrophic failure of the Gemini Agena 5002 target vehicle.

28 OCTOBER • The People's Liberation Armed Forces attacked the sailors and Marines at the Marble Mountain Air Facility, South Vietnam, destroying six UH-34D Seahorses and 13 UH-1E Iroquois, and damaging 26 Seahorses and four Iroquois.

2 DECEMBER • Twenty-one F-4B Phantom IIs and A-4C Skyhawks launched from *Enterprise* (CVAN 65) against People's Liberation Armed Forces installations near Bien Hoa, South Vietnam, on the first combat strikes from the ship and the first from a nuclear-powered carrier. Aircraft operating from the carrier completed 125 strike sorties and unloaded 167 tons of bombs and rockets on the enemy, and flew 131 sorties the following day.

4 DECEMBER • Gemini VII, crewed by Lt. Col. Frank Borman, USAF, and Cmdr. James A. Lovell Jr., launched from John F. Kennedy Space Center, Fla. The mission accomplished the major objectives of a demonstration of manned orbital flight and an evaluation of the effects of prolonged exposure to the space environment on the astronauts. On 18 December, the capsule splashed down in the Atlantic about 250 miles north of Grand Turk Island near 25°25'N, 70°7'W, within seven miles of primary recovery ship *Wasp* (CVS 18). The proximity to the landing point enabled HS-11 SH-3A Sea Kings to recover the astronauts and the spacecraft separately, and convey them to *Wasp* within an hour.

15 DECEMBER • Gemini VI-A crewed by Capt. Walter M. Schirra Jr. and Maj. Thomas P. Stafford, USAF, launched from John F. Kennedy Space Center, Fla. The mission accomplished the major objective of a successful rendezvous with Gemini VII. On 16 December, the capsule splashed down in the western Atlantic about 300 miles north of Puerto Rico near 23°42'N, 67°48'W, within seven miles of primary recovery ship *Wasp* (CVS 18). Schirra and Stafford remained within the capsule, and SH-3A Sea Kings of HS-11 recovered the astronauts and their spacecraft and delivered them to *Wasp*.

20 DECEMBER • The Secretary of the Navy established a director of Naval Laboratories on the staff of the assistant secretary for Research and Development, and directed the additional responsibilities of director of Laboratory Programs in the Office of Naval Material. The administrative responsibility for laboratories was subsequently transferred to this dual office while NAVAIR assumed command of test and evaluation facilities such as Naval Air Test Center, Naval Missile Center, and Naval Air Engineering Center.

1966

20 JANUARY • A contract for the production of Walleye television-guided air-to-surface glide bombs was issued to the Martin Marietta Corp.

26 FEBRUARY • Apollo-Saturn 201 lifted off via a Saturn IB rocket from John F. Kennedy Space Center, Fla. This first unmanned spacecraft of the Apollo series completed a suborbital flight and splashed down in the South Atlantic about 200 miles east of Ascension Island. A helicopter from amphibious assault ship *Boxer* (LPH 4) recovered the command module.

1 MARCH • Naval Air Transport Wing, Atlantic was disestablished.

2 MARCH • *Constellation* (CVA 64) began receiving weather data from weather satellite *Essa 2*. The transmission marked the second experimental shipboard installation of receivers capable of presenting a picture of major weather patterns taken from space, and the evaluation continued testing that began in 1963 on board *Saratoga* (CVA 60) with satellites *Tiros 8* and *Nimbus*.

16 MARCH • Gemini VIII crewed by Neil A. Armstrong and Maj. David R. Scott, USAF, launched from John F. Kennedy Space Center, Fla. After only seven orbits, an attitude and maneuver system thruster malfunctioned. The astronauts regained control by using the reentry control system, but the action required the early termination of the mission, and the capsule splashed down in the western Pacific about 500 miles east of Okinawa near 25°12'N, 136°5'E. The landing occurred within seven miles of destroyer *Leonard F. Mason* (DD 852) and she recovered



A UH-2A Seasprite of HC-1 flies plane guard for *Ranger* (CVA 61) while the ship operates off Vietnam, c. 1965–1966.

the astronauts and their spacecraft. Additional vessels that supported the recovery included amphibious assault ship *Boxer* (LPH 4) in the Atlantic.

17 MARCH • The X-22A research aircraft made its first flight at Buffalo, N.Y.

31 MARCH • A flight test of a helicopter capsule escape system involving the recovery of occupants by separation of the inhabited fuselage section from the aircraft proper, demonstrated the feasibility of its use during inflight emergencies at NAF El Centro, Calif., using a modified H-25.

4 APRIL • NASA announced the selection of 19 astronauts including 11 naval aviators—John S. Bull, Ronald E. Evans, Thomas K. Mattingly II, Bruce McCandless II, Edgar D. Mitchell, and Paul J. Weitz on active duty in the Navy, and Gerald P. Carr and Jack R. Lousma on active service in the Marine Corps. The selectees also included civilians Don L. Lind, USNR, and Marine pilots Vance D. Brand and Fred W. Haise Jr.

5 APRIL • The Secretary of Defense approved a joint request from the secretaries of the Navy and Air Force for the removal of Navy air transport units from the Military Airlift Command. The disestablishment of Navy units during the first half of 1967 accomplished the withdrawal.



The first of two X-22A vertical takeoff and landing research aircraft, BuNo 151520, was removed from flight status after a hard emergency landing in August 1966.

10 APRIL • Two Navy enlisted men together with a medical officer and a civilian electronics technician acting as observers began spinning at four revolutions per minute in the Coriolis Acceleration Platform of the Naval Aerospace Medical Institute, NAS Pensacola, Fla. The event commenced a four-day test to determine the ability of humans to adapt to a new form of rotation for potential use in space stations to produce artificial gravity.

18 APRIL • The Naval Pre-Flight School was redesignated Naval Aviation Schools Command during a reorganization of Naval Air Basic Training Command schools at NAS Pensacola, Fla. In addition, six existing schools became departments of the new command—Aviation Officer Candidate, Aviation Officer Indoctrination, Flight



NH 69968

The fifth of five experimental XC-142A vertical takeoff and landing transports, SerNo 62-5925, lands on board *Bennington* (CVS 20), 18 May 1966.

Preparation, Indoctrination for Naval Academy and NROTC Midshipman, Instructor Training, and Survival Training.

1 MAY • A reorganization of the Navy Department became effective which placed material, medical, and personnel supporting organizations under the command of the Chief of Naval Operations, abolished the Naval Material Support Establishment and its component bureaus, and in their place set up the Naval Material Command composed of six functional or systems commands: Air, Electronics, Facilities Engineering, Ordnance, Ships, and Supply.

11 MAY • The commanding officer of Marine Aircraft Group 12 piloted an A-4 Skyhawk during a launch from a catapult at the expeditionary airfield at Chu Lai, South Vietnam. The event marked the first combat use of the land-based catapult, which was capable of launching fully loaded tactical aircraft from runways less than 3,000 feet long.

15 MAY • *Intrepid* (CVS 11), with Carrier Air Wing 10 embarked, arrived in Vietnamese waters to operate as an attack carrier although still classified as an antisubmarine carrier. On the first day of battle, aircraft of her air wing composed entirely of attack squadrons flew 97 combat sorties against People's Liberation Armed Forces troop concentrations and supply storage areas around Saigon, South Vietnam.

18 MAY • Lt. Roger L. Rich Jr. piloted the XC-142A tri-service vertical and/or short takeoff and landing transport during its first carrier flights on board *Bennington* (CVS 20) at sea off San Diego, Calif. Additional Navy, Marine, and Army pilots took turns at the controls of the aircraft.

3 JUNE • Gemini IX-A crewed by Lt. Col. Thomas P. Stafford, USAF, and Lt. Cmdr. Eugene A. Cernan launched from John F. Kennedy Space Center, Fla. The mission failed to accomplish the major objective of docking with

the augmented target docking adapter because the target's shroud failed to separate, but Cernan spent more than an hour outside the spacecraft. On 6 June, the capsule splashed down in the western Atlantic about 345 miles east of Cape Kennedy near 27°52'N, 75°4'W, within one mile of primary recovery ship *Wasp* (CVS 18). Carrier Air Group commander Cmdr. D. A. Barksdale circled overhead in an S-2E Tracker as "Air Boss One." Six SH-3A Sea Kings from HS-11, including Aircraft No. 57, BuNo 149710, assisted the recovery, but the astronauts remained in their spacecraft and the carrier hoisted them on board. Stafford and Cernan were flown to the space center and *Wasp* returned with the capsule to Boston.

16 JUNE • *Hancock* (CVA 19) launched A-4 Skyhawks and F-8 Crusaders against an area 24 miles west of Thanh Hoa, North Vietnam. The battle marked the first carrier strike on petroleum-oil-lubricants facilities since 1964, and the beginning of what expanded into a systematic effort to destroy the North Vietnamese petroleum storage system.

1 JULY • Three North Vietnamese torpedo boats attacked frigate *Coontz* (DLG 9) and destroyer *Rogers* (DD 876) 40 miles off shore in the Gulf of Tonkin while the ships conducted search and rescue missions. Aircraft from *Hancock* (CVA 19) and *Constellation* (CVA 64) sank all three vessels with bombs, rockets, and 20mm gunfire. *Coontz* pulled 19 survivors from the water.



NASA 66H725

SH-3A Sea Kings from HS-11 hover over astronauts Lt. Col. Thomas P. Stafford, USAF, (right) and Lt. Cmdr. Eugene A. Cernan after the splashdown of Gemini IX-A, 6 June 1966.

18 JULY • Gemini X crewed by Lt. Cmdr. John W. Young and Maj. Michael Collins, USAF, launched from John F. Kennedy Space Center, Fla. The astronauts achieved the major objective during their rendezvous with the target vehicle on their fourth orbit. On 21 July, the spacecraft splashed down in the Atlantic three miles from the planned landing point about 460 miles east of Cape Kennedy, Fla., near 26°45'N, 71°57'W, within sight of the primary recovery vessel, amphibious assault ship *Guadalcanal* (LPH 7). Pilot Lt. Cmdr. Bruce S. Fleming, copilot Lt. j.g. James L. Stewart, and aircrewmembers John S. Alman and Warren R. Watkins of HS-3 manned the SH-3A Sea King, BuNo 152132, Aircraft No. 63, that recovered the astronauts.

19 JULY • The Chief of Naval Operations established the LHA program to bring into being a new concept of an amphibious assault ship. The plans developed through preliminary study envisioned a large multipurpose ship with a flight deck for helicopters, a wet boat well for landing craft, the troop carrying capacity of an amphibious assault ship (LPH), and a cargo capacity nearly that of an attack cargo ship (AKA).

25 AUGUST • Apollo-Saturn 202 lifted off from John F. Kennedy Space Center, Fla. The objectives of this second unmanned spacecraft of the Apollo series included the evaluation of the heat shield during a high heat, long-duration entry simulating a lunar return. The spacecraft



NASA 66H1030

Divers recover Lt. Cmdr. John W. Young (right, in raft) and Maj. Michael Collins, USAF, after the splashdown of Gemini X, 21 July 1966.

splashed down in the Pacific about 500 miles southeast of Wake Island and 192 nautical miles from primary recovery ship *Hornet* (CVS 12) near 17°52'N, 171°52'E. *Hornet* retrieved the command module.

26 AUGUST • Cmdr. James R. Williford III, commanding officer of HS-11, made the first helicopter refueling from a ship in the Atlantic Fleet when he rendezvoused with destroyer *Charles P. Cecil* (DD 835) while piloting an SH-3A Sea King, BuNo 149718, designated Aircraft No. 64.

3 SEPTEMBER • Naval Air Test Center pilots completed a two-day open sea suitability trial of an RH-3A Sea King on board mine countermeasures ship *Ozark* (MCS 2). This trial completed the center's evaluation of the helicopters for the minesweeper role. The next year, a mine countermeasures development and training program in the Atlantic Fleet used the ship and a helicopter detachment from newly established

HC-6, and a detachment from HC-7 began preparations for training and operation on board *Catskill* (MCS 1) in the Pacific.

8 SEPTEMBER • An A-3A Skywarrior carrying an AIM-54A air-to-air missile and its control system located, locked on at long range, and launched the Phoenix to score an intercept on a jet target drone over the Navy Pacific Missile Range near San Nicolas Island, Calif. A Phoenix had been launched successfully prior to this achievement, but this event marked the first full-scale test employing all functions of the missile control system.

12 SEPTEMBER • Gemini XI, manned by Lt. Cmdrs. Charles Conrad Jr. and Richard F. Gordon Jr., launched from John F. Kennedy Space Center, Fla. The astronauts attained the primary objective of the mission when they docked with the target vehicle. On 15 September, the spacecraft splashed down in the Atlantic 700 miles off Cape Kennedy



NH 69965

Crewmembers of amphibious assault ship *Guadalcanal* (LPH 7) salute their participation in the recovery of Gemini X.

near 24°15'N, 70°00'W, within three miles of the planned landing point. Pilot Lt. Arthur G. Doege, copilot Lt. Herman D. Rotsch, and aircrewmen Robert L. Brugh and Donald Scarborough of HS-3 manned Aircraft No. 63, an SH-3A Sea King, BuNo 152132, embarked on board amphibious assault ship *Guam* (LPH 9), that recovered the astronauts. *Guam* also retrieved the spacecraft.

16 SEPTEMBER • Helicopters operating from *Oriskany* (CVA 34) rescued the entire crew of 44 men from British merchant ship *August Moon*, when she broke up in heavy seas on Pratas Reef, 175 miles southeast of Hong Kong.

7 OCTOBER • Hurricane Inez devastated the northern tip of the Yucatán Peninsula and on 10 October made landfall near Tampico, Mexico. The U.S. Navy, Marine Corps, Air Force, and Army airlifted more than 102,000-pounds of relief supplies and evacuated 80 victims of the resulting flooding, and Navy doctors treated hundreds of additional casualties.

26 OCTOBER • *Oriskany* (CVA 34) canceled the day's strikes over North Vietnam because of inclement weather in the South China Sea. Shortly thereafter, AAs George James and James Sider accidentally ignited a Mk 24 magnesium

parachute flare while stowing flares and hurled the device into a storage locker filled with 600 to 700 flares. A fire swept the hangar deck and cooked off ordnance, killing 44 men and wounding 38. *Oriskany* made to Subic Bay, Philippines, for repairs and then to San Francisco, Calif.

3 NOVEMBER • A test flight of the Air Force's Manned Orbiting Laboratory (MOL-B) was launched from John F. Kennedy Space Center, Fla., atop a Titan IIIC. The objectives of the unmanned suborbital flight included the evaluation of the performance of the heat shield during reentry. The splash down occurred in the Atlantic near 9°6'S, 14°15'W. The spacecraft landed 40 nautical miles from amphibious transport dock *La Salle* (LPD 3) that recovered the capsule.

4 NOVEMBER • Eight men were killed when a flash fire erupted in a storage compartment containing paint, oil, and hydraulic fluid four decks below the hangar deck on board *Franklin D. Roosevelt* (CVA 42) while she launched strikes from the South China Sea over North Vietnam.

8 NOVEMBER • The Chief of Naval Operations approved a reorganization of the Naval Air Reserve involving the disestablishment of all air wing staffs, establishing in the



Ships of Task Force 77 including *Oriskany* (CVA 34), center, maneuver in the Gulf of Tonkin, as viewed from the signal bridge of *Constellation* (CVA 64).

place of each an administrative unit entitled Naval Air Reserve Staff and a training unit as Naval Air Reserve Division (Fleet Air).

11 NOVEMBER • Gemini XII, manned by Capt. James A. Lovell Jr. and Maj. Edwin E. Aldrin Jr., USAF, launched from John F. Kennedy Space Center, Fla. The mission accomplished the major objective of docking with a target vehicle. On 15 November, the capsule splashed down about 600 miles east of Cape Kennedy near 24°36'4"N, 69°56'2"W, within a mile of primary recovery ship *Wasp* (CVS 18). Strong winds, rough seas, and rain plagued the recovery. Three HS-11 SH-3A Sea Kings flew the recovery mission supported by additional aircraft including a photo Sea King, eight VS-28 S-2E Trackers for contingency search, and a VAW-12 Detachment 18 E-1B Tracer. A helicopter, designated Search Three, manned by pilot Lt. Cmdr. Samuel

R. Aydelotte, copilot Lt. j.g. J. E. Davis, and aircrewman AT3 Konrad Kerr, hoisted Lovell and Aldrin aloft and returned them to *Wasp*, and the carrier hoisted the spacecraft on board. On 18 November, *Wasp* returned the capsule to Boston, Mass. This operation closed the Gemini program.

1967

27 JANUARY • A fire swept through Apollo 1's Command Module 012 during a simulated launch of the first manned Apollo space flight atop its Saturn IB launch vehicle at John F. Kennedy Space Center, Fla. The blaze killed the crew, Lt. Cols. Virgil I. Grissom, USAF, and Edward H. White II, USAF, and Lt. Cmdr. Roger B. Chaffee. NASA's Apollo 204 (the mission's original designation) Review Board did not discover evidence that suggested sabotage or a single ignition



The fourth YA2F-1 Intruder, BuNo 147867, shown here, was the first fitted with the full set of advanced electronic systems which enabled later version A-6s to penetrate enemy defenses and to bomb through the clouds.

source of the fire, but determined that the most probable initiator resulted from a momentary power failure in the area of an electrical arc. On 31 January, Grissom and Chaffee were buried in the National Cemetery, Arlington, Va., and White at the Military Academy, West Point, N.Y.

26 FEBRUARY • Seven VA-35 A-6As flying from *Enterprise* (CVAN 65) participated in the first Navy aerial mining operations since World War II. Cmdr. Arthur H. Barrie, squadron commanding officer, led the Intruders through light antiaircraft fire to drop two fields of 35 Mk 50-0 and 52-2 mines overnight in the estuaries of the North Vietnamese Song Ca and Song Giang (rivers). This was to disrupt shallow draft coastal and riverine barges and sampans from slipping into otherwise inaccessible areas to supply the People's Liberation Armed Forces and Pathet Lao. F-4B Phantom IIs of VF-96 escorted the Intruders. During

subsequent missions, VA-35 dropped 53 mines in 11 sorties altogether, and the following month, aircraft from *Kitty Hawk* (CVA 63) flew additional minelaying missions over the Cua Sot, Kien Giang, and Song Ma (rivers). The North Vietnamese initiated mine clearance efforts, but the missions impeded smuggling and forced its temporary suspension.

14 MARCH • A VP-17 SP-2H Neptune patrolling from NS Sangley Point, Philippines, spotted a steel-hulled North Vietnamese trawler smuggling arms to People's Liberation Armed Forces insurgents during Operation Market Time—the interdiction of enemy supplies into South Vietnam. Destroyer *Brister* (DER 327), Coast Guard cutter *Point Ellis* (WPB 82330), and patrol craft *PCF 78* intercepted the smugglers and they beached the trawler. A boarding party recovered the munitions.



1115829

An SP-2H Neptune, BuNo 150280, of VP-1 inspects a Vietnamese junk during Operation Market Time, c. 1966.



1143447

A UH-1B Iroquois of HAL-3 supports patrol boats in the Mekong Delta, 22 April 1968.

1 APRIL • The status of overhaul and repair departments at six Navy and one Marine air stations was changed to that of separate commands each titled Naval Air Rework Facility.

1 APRIL • Helicopter Attack Squadron (Light) [HAL] 3 was established at Vung Tau, South Vietnam, Lt. Cmdr. Joseph B. Howard commanding. The unit fought as the only armed UH-1 Iroquois Navy helicopter squadron during the Vietnam War, and with Light Attack Squadron (VAL) 4, comprised the only Navy air commands homeported in South Vietnam. HAL-3 uniquely provided gunship support for Navy and Army riverine operations within the Mekong Delta and pioneered tactics in support of patrol boats and shore installations. The squadron operated a mix of UH-1B/L/N and HH-1K helicopters from various bases in the delta and from specially equipped patrol craft tenders (AGP), formerly tank landing ships (LST).

12 APRIL • The Navy approved a wing insignia for aviation experimental psychologists and aviation physiologists. The new design appeared similar to flight surgeon wings except

for the use of the gold oak leaf of the Medical Service Corps in place of the leaf with acorn of the Medical Corps.

24 APRIL • Aircraft from Seventh Fleet carriers launched their first strikes on North Vietnamese MiG bases with an attack on the airfield at Kep, 37 miles northeast of Hanoi. A-6 Intruders and A-4 Skyhawks from *Kitty Hawk* (CVA 63) carried out the attack and Intruders made a further raid that night. While providing cover for the bombers during the first attack, pilot Lt. Cmdr. Charles E. Southwick and radar intercept officer (RIO) Ens. James W. Laing, and pilot Lt. Hugh D. Wisely and RIO Lt. j.g. Gareth L. Anderson, manned two VF-114 F-4B Phantom IIs, and each received credit for a probable MiG-17 kill with AIM-9D/B Sidewinder air-to-air missiles.

1 MAY • *Bon Homme Richard* (CVA 31) and *Enterprise* (CVAN 65) launched a coordinated strike against more than 30 North Vietnamese MiGs at Kep, North Vietnam. The Seventh Air Force also struck MiGs at Hoa Lac. Lt. Cmdr. Marshall O. Wright of VF-211 flew an F-8E Crusader, BuNo 150923, from *Bon Homme Richard* and shot down a MiG-17F with an AIM-9D Sidewinder missile. Lt. Cmdr. Theodore R. Swartz and his wingman, Lt. John M. Waples, of VA-76 flew two A-4Cs, BuNos 148609 and 147792, respectively, from *Bon Homme Richard*, and rocketed two taxiing MiGs. One of the Frescoes exploded and the other stopped. Two additional MiG-17s attacked the two Skyhawks and Swartz shot down one with a Zuni 5-inch rocket, subsequently receiving the Silver Star. Navy and Air Force aircraft together claimed ten Frescoes at the two fields. The North Vietnamese responded by dispersing aircraft and strengthening defenses, and built dummy aircraft and antiaircraft and missile sites to entice U.S. aircraft to squander ordnance.

15 MAY • The Chief of Naval Operations directed the establishment of an aircraft intermediate maintenance department in all operating carriers except the ship operating with the Naval Air Training Command. The new organization was to assume responsibility for maintenance afloat formerly held by the air wing and air group commanders.

19 MAY • Cmdr. Charles Fritz and Capt. Alex Gillespie, USMC, piloted two A-7A Corsair IIs during a transatlantic

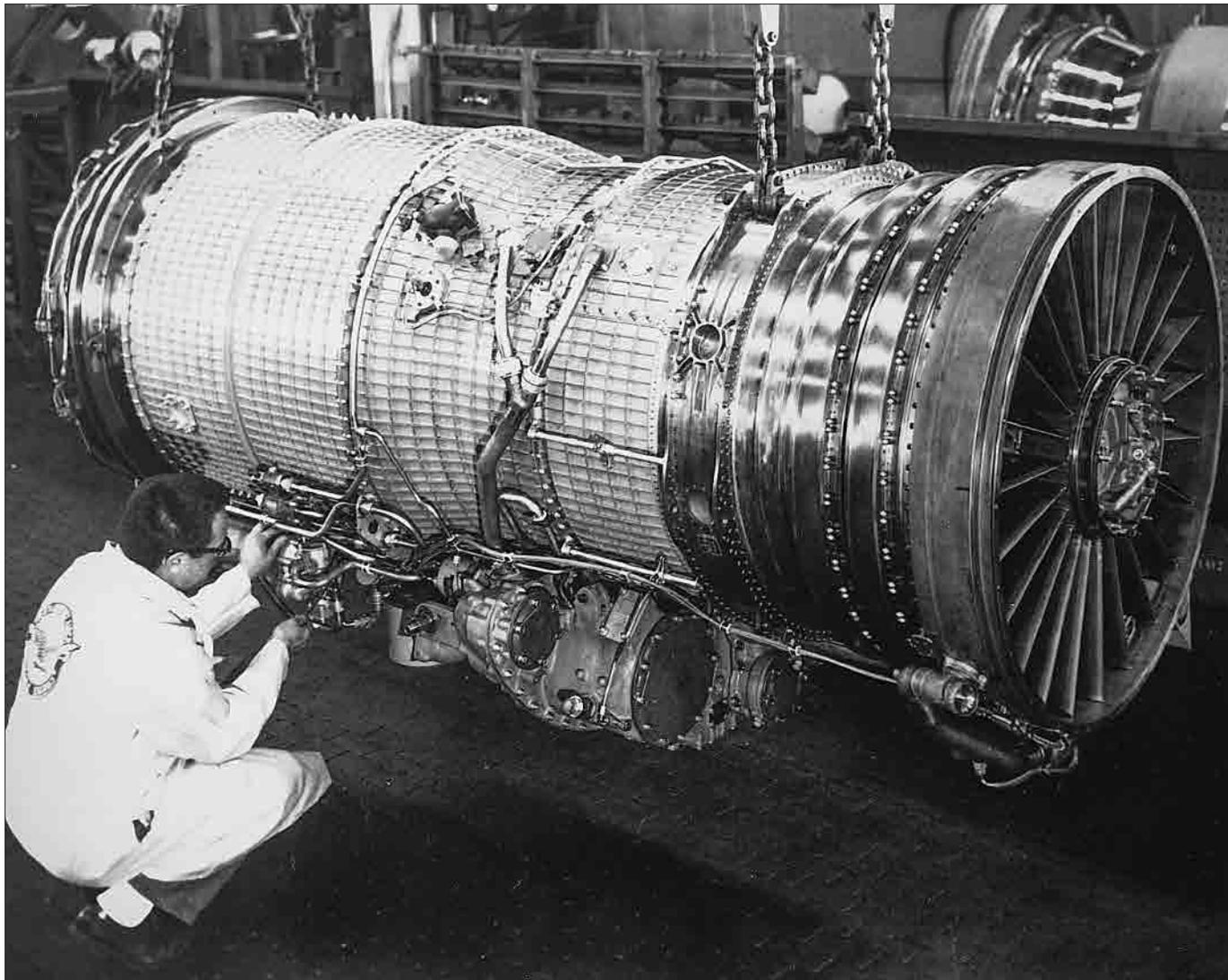


A crewmember reloads an M-60 machine gun on a Marine UH-1E Iroquois.



An A-7 Corsair II of VA-86.

crossing from NAS Patuxent River, Md., to Evreux, France. Their 3,327 nautical-mile flight in 7 hours, 1 minute, established an unofficial record for long-distance unrefueled flight by light attack jets.



NH 69963

A Pratt & Whitney technician makes an adjustment to a TF30 turbofan engine for an A-7 Corsair II. The engine powered the Navy's A-7A, B, and Cs but was replaced by the more powerful Allison TF41 in the A-7E.

20 MAY • As tensions mounted between Arabs and Israelis, the Sixth Fleet deployed *Saratoga* (CVA 60) to the eastern Mediterranean. On 25 May, *America* (CVA 66) received orders to rendezvous with *Saratoga* north of Crete. *Intrepid* (CVS 11) operated independently within the Fleet while en route to Vietnamese waters and, on 31 May, passed through the Suez Canal southbound. These ships performed a non-combat deterrent role against Soviet naval deployments to the area during the period leading to the Six-Day War.

24 MAY • Following a ten-month deployment to the western Pacific during the last combat tour for ships of her type, seaplane tender *Currituck* (AV 7) returned to NAS North Island, Calif.

5 JUNE • The Arabs and Israelis began the Six-Day War. *Saratoga* (CVA 60) and *America* (CVA 66) maneuvered in the vicinity of Crete. On 8 June, Israeli aircraft and three motor torpedo boats attacked technical research ship *Liberty* (AGTR 5) killing 34 men and wounding 169 while she conducted communications and electronic research 13 nautical miles off the Sinai Peninsula.

The Sixth Fleet ordered *America* and *Saratoga* to respond by using “force including destruction as necessary.” *America* embarked A-4Cs of VA-36, -64, and -66 and launched four of the Skyhawks to counterattack the Israelis but directed the jets to remain clear of land. The Israelis apologized and maintained that the attacks resulted from mistaken identity and the A-4s received recall orders.



America (CVA 66) tests her water washdown system for firefighting. The flush-deck nozzles can provide up to 27,000 gallons of water per minute.

Meanwhile, F-4B Phantom IIs of VF-33 and -102 flew combat air patrols over *America* and *Liberty*, and RA-5C Vigilantes of RVAH-5 completed reconnaissance missions. The following day, *Saratoga* steamed south of Cyprus as a show of force.

America aided *Liberty* and made her nearest approach to the fighting about 100 nautical miles north of Alexandria, Egypt. *America* transferred medical teams to destroyers *Davis* (DD 937) and *Massey* (DD 778), and, on 9 June, the destroyers rendezvoused with *Liberty*. Two SH-3A Sea Kings from HS-9 Detachment 66, embarked on board *America*, evacuated casualties to the carrier. *Liberty* completed temporary repairs at Valletta, Malta.

18 JUNE • An LC-130F Hercules of VX-6 completed the first scheduled winter flight to Antarctica by flying from Christchurch, New Zealand, to Williams Field seven miles from McMurdo Station. Earlier winter missions had been made to Antarctica as a result of medical emergencies.

30 JUNE • Naval Air Transport Wing, Pacific, was disestablished at NAS Moffett Field, Calif.

1 JULY • A Titan IIIC carried the Department of Defense Gravity Experiment (DODGE) satellite into orbit from John F. Kennedy Space Center, Fla. The Applied Physics Laboratory developed DODGE under the management

of NAVAIR to provide a three-axis passive stabilization system for use on satellites orbiting the earth at synchronous altitudes. On 25 July, DODGE made the first full-disc color photograph of the earth from space.

1 JULY • The Office of the Naval Weather Service was redesignated the Naval Weather Service Command and its mission underwent modification to ensure the fulfillment of Navy meteorological requirements and Department of Defense requirements for oceanographic analyses and to provide technical guidance in meteorological matters. The Naval Weather Service Division, Op-09B7, was disestablished, and its functions were assigned to the new command.

1 JULY • Naval Air Propulsion Test Center was established with its headquarters at Trenton, N.J. The move resulted from the merger of the Naval Air Turbine Test Station, Trenton, and the Aeronautical Engine Laboratory, NAEC Philadelphia, Pa.

19 JULY • Air Transport Squadron 3 was disestablished as the last Navy component of the Military Airlift Command, McGuire AFB, N.J. The decision ended an interservice partnership that began on 1 June 1948 with the combination of Navy and Air Force transport squadrons to form the Military Air Transport Service.

29 JULY • A fire erupted on board *Forrestal* (CVA 59) while she launched strikes against North Vietnamese targets. Pilot Lt. Cmdr. James E. Bangert and radar intercept officer Lt. j.g. Lawrence E. McKay from VF-11 manned an F-4B Phantom II, BuNo 153061, Aircraft No. 110, that inadvertently launched a Zuni 5-inch rocket that struck an A-4E on the port side of the ship. Some 132 men died in the ensuing fire and weapon explosions, two disappeared (missing, presumed dead), and 62 suffered injuries. Twenty-one aircraft were stricken; seven F-4Bs, 11 A-4Es, and three RA-5C Vigilantes. Investigators revealed maintenance issues but cleared Bangert and McKay, and the flight deck film became mandatory viewing for fire fighting trainees.

Ships that aided *Forrestal* included *Intrepid* (CVS 11), *Bon Homme Richard* (CVA 31), and *Oriskany* (CVA 34). Helicopters from ships and from Da Nang AB, South Vietnam, rescued men from the flames and the sea. Pilot Lt. David Clement, copilot Ens. Leonard M. Eiland Jr., and crew ADJ3 James O. James Jr. and AN Albert E. Barrows of HC-1 Detachment G, flying plane guard in a UH-2A Seasprite, saved five men from the water in the first hour.

Among those who survived the inferno was pilot Lt. Cmdr. John S. McCain III, who climbed from A-4E Skyhawk, Aircraft No. 416. On 26 October 1967, a North Vietnamese surface-to-air missile shot McCain down and he was held captive until 1973. He subsequently received the Distinguished Flying Cross, Silver Star, and Purple Heart, and became an Arizona senator and presidential candidate.

29 JULY • Vice President Hubert H. Humphrey announced the impending release of the Transit Navy Navigation Satellite System for use by merchant ships and for commercial manufacture of shipboard receivers.

15 AUGUST • Adm. James S. Russell (Ret.) convened the first meeting of the Aircraft Carrier Safety Review Panel. The panel examined the actual and potential sources of fire and explosions in aircraft carriers with the objective of minimizing their occurrence and damage, and to propose further improvements in the equipment and techniques used to fight fires and to control damage by explosions.

10 OCTOBER • Rear Adm. Albert C. Read (Ret.) (Naval Aviator No. 24) died in Miami, Fla. Read graduated from the Naval Academy Class of 1907, and contributed to the

development of naval aviation from his commencement of flight training on 8 July 1915, including command of NC-4 during the first flight across the Atlantic in 1919, through his retirement on 1 September 1946.

21 OCTOBER • Lt. Cmdr. Wilmer P. Cook and Lt. j.g. Mitchell L. Watson of VA-155 each flying an A-4E Skyhawk from *Coral Sea* (CVA 43) spotted six North Vietnamese torpedo boats among a large group of fishing junks near Thanh Hoa, North Vietnam. The duo sank four of the vessels with 250- and 500-pound bombs, damaged the fifth, and compelled the sixth to escape into a river mouth.

24 OCTOBER • Cmdr. James B. Linder of Carrier Air Wing 15 led a strike group comprising aircraft from *Coral Sea* (CVA 43), *Oriskany* (CVA 34), and the USAF against the airfield at Phuc Yen, 11 miles northwest of Hanoi, North Vietnam. The following day, two additional raids concentrated on MiGs parked in revetments. The attack destroyed an estimated eight MiGs on the ground and cratered the taxiways with 500- and 750-pound bombs. Several airborne MiGs refused to engage, but the defenders fired an estimated 30 surface-to-air missiles that shot down two F-4B Phantom IIs of VF-151 manned by Cmdr. Charles R. Gillespie Jr. and Lt. j.g. Richard C. Clark, and by Lts. (j.g.) Robert F. Frishmann and Earl G. Lewis. Gillespie, Frishmann, and Lewis endured captivity until their release after the war, but Clark died.

25 OCTOBER • A Zuni 5-inch rocket ignited during a routine test in the forward assembly area on board *Coral Sea* (CVA 43) and burned nine sailors, three critically. All nine casualties were flown for treatment to Clark AFB, Philippines.

31 OCTOBER • *Currituck* (AV 7) was decommissioned as the last seaplane tender in service and transferred to the Reserve Fleet, Mare Island, Calif.

NOVEMBER • In 1966, the Navy created a project initially designated Air Launched Acoustical Reconnaissance as part of the Trail Road Interdiction Mission—better known as the “McNamara Line” after Secretary of Defense Robert S. McNamara—to monitor communist infiltration into South Vietnam, Cambodia, and Laos. In August 1966, a scientific study group proposed a broader air-supported barrier system



An F-4B Phantom II of VF-143 off *Constellation* (CVA 64) fires Zuni 5-inch rockets over the South China Sea during a 1964 exercise.

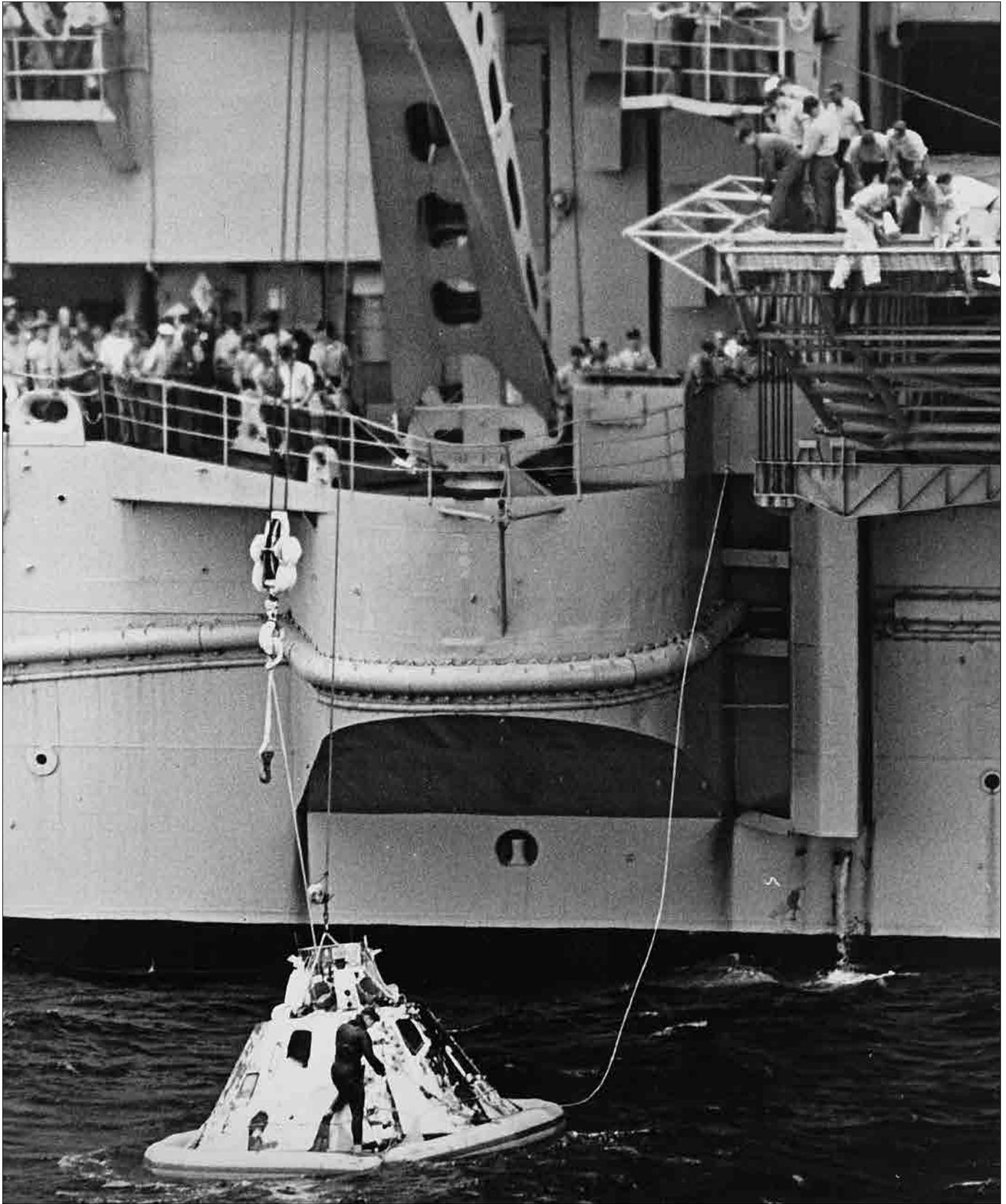
and the next month the Secretary of Defense established the Defense Communications Planning Group to implement the concept. Beginning this month, 12 VO-67 OP-2E Neptunes from Nakhon Phanom AB, Thailand, flew the first naval combat missions of the project to seed suspected infiltration routes with sensors. Enemy 37mm gunfire drove the flights to 5,000 feet, and sensors dropped from the higher altitude impacted the soil and were ineffective. The Air Force absorbed the program in June 1968.

6 NOVEMBER • Pilot Cmdr. Joseph P. Smolinski and copilot Cmdr. George A. Surovik of VP-40 completed the last operational flight by seaplanes of the U.S. Navy in an SP-5B Marlin at NAS North Island, Calif.

6 NOVEMBER • Liberian freighter *Loyal Fortunes* en route from Saigon, South Vietnam, to Kaohsiung, Taiwan,

ran aground and began to break up on Pratas Reef, 170 miles southeast of Hong Kong. On 7 November, two helicopters operating from *Coral Sea* (CVA 43) rescued all 37 crewmembers and the carrier returned the mariners to Hong Kong.

9 NOVEMBER • Unmanned Apollo 4 launched from John F. Kennedy Space Center, Fla. The mission accomplished the main objectives of the initial all-up test of a Saturn V launch vehicle and of the Command Module Block II heatshield. The spacecraft splashed down in the Pacific about 600 miles northwest of Hawaii and within nine miles of its target point. Heavy seas delayed the recovery of the command module, apex heatshield, and a main parachute by *Bennington* (CVS 20).



NASA 67H1536

A diver prepares the Apollo 4 space capsule for recovery by *Bennington* (CVS 20) after it splashed down 934 nautical miles northwest of Honolulu, Hawaii, on 9 November 1967.

1968

19 JANUARY • A VR-24 C-130 Hercules and helicopters from NAF Sigonella, Italy, delivered food, clothing, and medicine to aid about 40,000 people made homeless by an earthquake in the region of Montevago, Sicily.

23 JANUARY • The North Koreans seized naval intelligence vessel *Pueblo* (AGER 2) in international waters; the ship made her closest point of approach to land at 15.8 nautical miles from the island of Ung-Do. The captors took *Pueblo* into Wönsan. The United States alerted commands including Task Group 77.5, consisting of *Enterprise* (CVAN 65), which reached a position in the East China Sea about 550 nautical miles south of Wönsan near 31°17'N, 129°8'E, when Commander Seventh Fleet Vice Adm. William F. Bringle ordered her to make “best speed” to the north. Foul weather had damaged aircraft and *Enterprise* could only

launch 20 bombers that would have reached the Wönsan area too late to affect the outcome. In addition, insufficient numbers of ready Marine Corps and Air Force aircraft existed to support the rescue.

During the succeeding days, retaliatory scenarios ranged from limited strikes against North Korean forces at Wönsan to aerial mining of the harbor by A-6 Intruders, a blockade of Wönsan or additional ports, or raids against further military targets requiring Navy, Marine, and Air Force aircraft including Boeing B-52D Stratofortresses. Reinforcements included *Yorktown* (CVS 10) and *Ranger* (CVA 61). On 27 January, six carrier squadrons of the Naval Air Reserve reported for active duty. The fighting in Vietnam required a shift in operations and, on 16 February, *Enterprise* received orders to turn around. On 1 March, *Kearsarge* (CVS 33) relieved *Yorktown*. Four days later *Coral Sea* (CVA 43) relieved *Ranger*. On 21 March, the United States ended the standing carrier presence in the area. On



A Marine UH-34D Seahorse, BuNo 150225, delivers ammunition to Marine gunners in South Vietnam. This helicopter survived the war and was stricken in 1972 at Pensacola, Fla.

USMC 184967



NH 69965

The eighth Marine CH-53A Sea Stallion built, BuNo 151691, displays its heavy-lift capability. The type first entered service in 1966.



NAH 002810

A UH-1B Iroquois gunship of HAL-3 searches for People's Liberation Armed Forces (Viet Cong) infiltrators within the Mekong Delta, April 1968.

16 September, the Department of Defense announced the return of the six Naval Air Reserve squadrons to inactive status within the following six weeks. In early December, *Hancock* (CVA 19) sailed in the Sea of Japan just before North Korea released its captives.

28 MARCH • Secretary of the Navy Paul R. Ignatius approved the establishment of a new restricted line officer category (152x) called the aeronautical maintenance duty officer.

31 MARCH • President Lyndon B. Johnson announced the cessation of the bombing of North Vietnamese targets north of the 20th parallel on the following day as an indication of U.S. willingness to make concessions to open the way for peace talks.

4 APRIL • Apollo 6 launched from John F. Kennedy Space Center, Fla. The unmanned mission encountered mechanical and technical problems and splashed down in the mid-Pacific about 380 miles north of Hawaii and 57 miles up-range from the predicted recovery area. Despite heavy swells, amphibious assault ship *Okinawa* (LPH 3) retrieved the spacecraft. In December NASA reported that Apollo 6 was “not a success in accordance with . . . mission objectives.”

5 APRIL • Astronauts Capt. James A. Lovell Jr., Stuart A. Roosa, and Charles M. Duke Jr. participated in a recovery test of Spacecraft 007 in the Gulf of Mexico through 7 April. The test crew did not encounter serious habitability problems but also did not “recommend the Apollo spacecraft for any extended sea voyages.”

3 MAY • The Navy combined the Aviation and Submarine Safety Centers to form the Naval Safety Center, Norfolk, Va. The establishment of the Office of the Assistant Chief of Naval Operations (Safety) occurred at the same time.

6 MAY • Astronaut Neil A. Armstrong crashed while piloting Lunar Landing Research Vehicle No. 1 during training at Ellington AFB, Texas. Armstrong ejected after losing control of the vehicle and landed by parachute with minor injuries. A loss of attitude control caused the accident. The investigators called for improvements in the vehicle design and operating practices and more stringent control over flying programs.

22 JUNE • The keel for *Nimitz* (CVN 68) was laid at Newport News Shipbuilding and Dry Dock Company, Va.



The first Marine AV-8A, BuNo 158384, demonstrates Harrier hover capabilities while in service with VMA-513, c. 1970. This aircraft was later converted to the YAV-8C and crashed on takeoff from *Tarawa* (LHA 1) on 5 September 1980.

1 JULY • To ensure a more rapid and efficient transition to combat status in the event of mobilization, the Naval Air Reserve was reorganized into wings and squadrons known collectively as the Naval Air Reserve Force. Effective on 1 August, Commander Naval Air Reserve Training assumed additional duty as Commander, Naval Air Reserve Force.

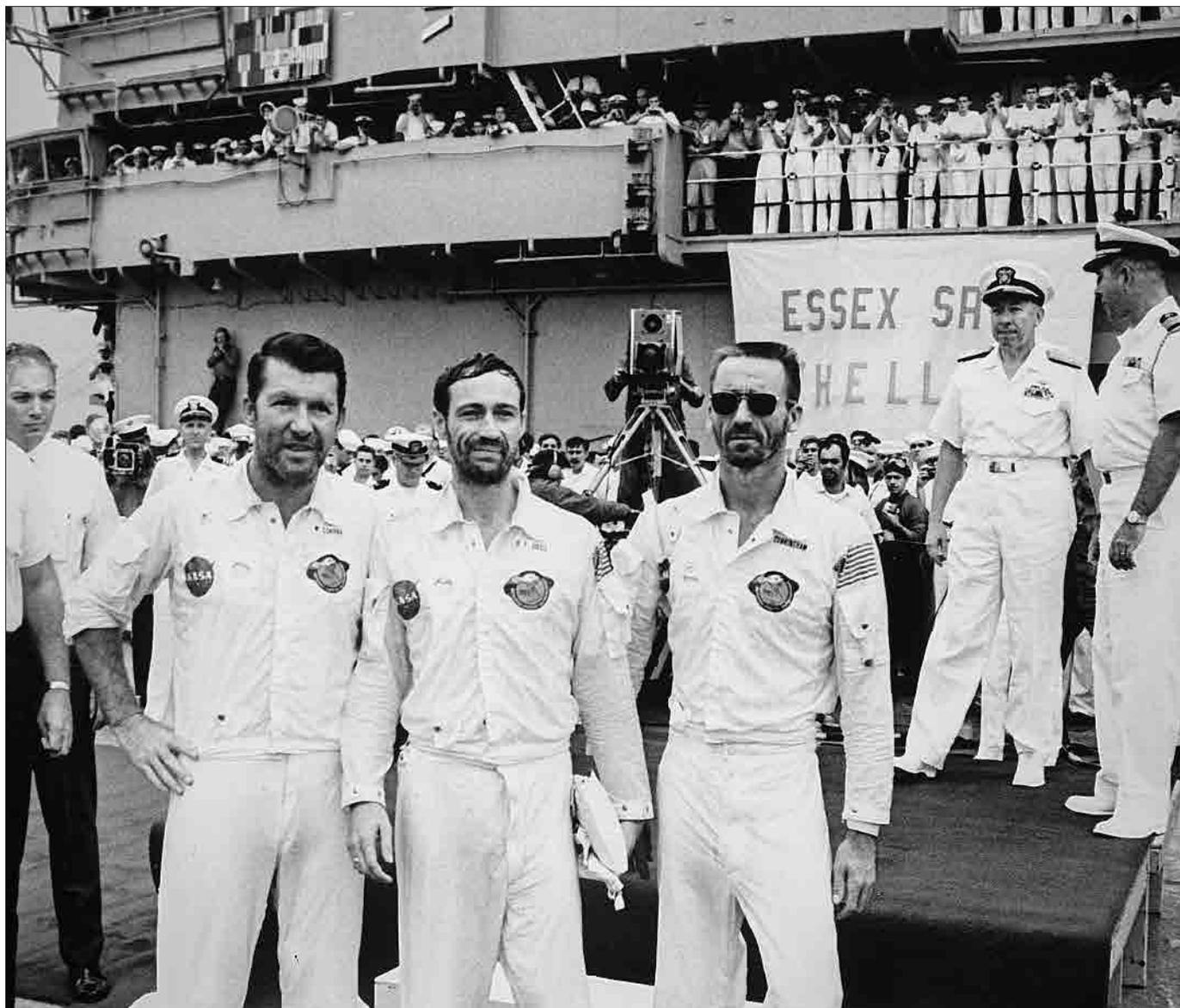
6 JULY • VMO-2 at Da Nang received the first OV-10As to arrive in South Vietnam. The counterinsurgency warfare Broncos flew forward air control, visual reconnaissance, and helicopter escort missions.

18 JULY • *Coral Sea* (CVA 43) completed carrier suitability trials of F-4K Phantom IIs for the Royal Navy off California. On 23 and 24 July, the ship completed carrier suitability trials of the F-111B. Aircraft No. 4, BuNo 151974, carried out ten arrested and eight touch-and-go landings. *Coral Sea* reported that sailors of V-3 Division considered the results “inconsistent” with the size of the ship because F-111Bs proved large and unwieldy and difficult to move.

24 AUGUST • A change in uniform regulations provided a new breast insignia for sailors and Marines qualified as flight officers. Effective on 31 December, the new wings replaced the old naval aviation observer wings.



Maj. Jacob E. Iles, USMC, an exchange pilot with RAF Wittering, England, instructs pilots converting to AV-8A Harriers in their new vocabulary, 23 March 1971.



NASA 66H986

The Apollo 7 astronauts—(from left) Capt. Walter M. Schirra Jr., Lt. Col. Donn F. Eisele, USAF, and Maj. R. Walter Cunningham, USMCR—on board *Essex* (CVS 9) after their splashdown, 22 October 1968.

SEPTEMBER • Col. Thomas H. Miller Jr., USMC, and Lt. Col. Clarence M. Baker, USMC, generated Marine interest in the acquisition of Harrier vertical takeoff and landing jets during a flight of a Harrier in England. On 22 October 1969, NAVAIR and the British government concluded an agreement to acquire AV-8As for the Marine Corps.

11 OCTOBER • Apollo 7, crewed by Capt. Walter M. Schirra Jr., Lt. Col. Donn F. Eisele, USAF, and Maj. R. Walter Cunningham, USMCR, launched from John F. Kennedy Space Center, Fla., as the first manned Apollo flight. It accomplished all the primary mission objectives, and on 14

October, the astronauts made the first live TV broadcast from a manned U.S. spacecraft. On 22 October, it splashed down in the Atlantic about 285 miles south of Bermuda and approximately eight miles from primary recovery ship *Essex* (CVS 9). Helicopters of HS-5 operating from *Essex* returned the astronauts to the carrier.

1 NOVEMBER • In response to previous orders from President Lyndon B. Johnson, all bombing of North Vietnam ceased at 2100 Saigon time. Earlier in the day, Cmdr. Kenneth E. Enney completed the last Navy mission over the restricted area in an A-7A Corsair II from *Constellation* (CVA 64).

6 NOVEMBER • The National Park Service of the Department of the Interior designated the lighter-than-air hangar at NAS Lakehurst, N.J. a National Historic Landmark.

15 NOVEMBER • The intensification of aerial efforts to interdict communist infiltration into South Vietnam, Cambodia, and Laos following the halt of the bombing of North Vietnam included a program designated Commando Hunt. Naval aircraft flew about one-fourth of the program's raids. Commando Hunt II attacked enemy efforts to repair bombed and washed-out roads beginning with the monsoons in May 1969. Commando Hunt III alternated daytime strikes against convoys and nighttime raids on antiaircraft and surface-to-air missile sites from November 1969 to April 1970. Commando Hunts IV and V attacked trucks and transshipment points, repair shops, and supply dumps. Commando Hunts VI and VII bombed the strategic passes leading into Laos and then sowed sensors along likely smuggling routes to identify infiltrators. The campaign cratered the landscape and led to widespread deforestation but failed to halt the infiltration.

21 DECEMBER • Apollo 8, crewed by Col. Frank Borman, USAF, Capt. James A. Lovell Jr., and Maj. William A. Anders, USAF, launched from John F. Kennedy Space Center, Fla. Apollo 8 achieved all mission objectives, and the crew became the first humans to leave the earth's gravitational field and to fly around the moon. On the fourth day, the astronauts temporarily lost communications as they passed behind the moon but became the first men to view the satellite's far side. On 27 December, the spacecraft made a predawn splash down in the Pacific within three miles of primary recovery ship *Yorktown* (CVS 10). As planned, aircraft and pararescue swimmers waited until local sunrise 50 minutes later, and then helicopters of HS-4 recovered and flew the crew to *Yorktown*.

1969

1 JANUARY • Through the New Year, American aircraft had flown 183,821 tactical sorties during the war over Laos including 24,842 Navy and 10,668 Marine missions, claimed the destruction of 4,106 vehicles and 820 bridges, and cut roads almost 13,000 times.

3 JANUARY • VAL-4 was established at NAS North Island, Calif. This first Navy squadron of its type operated OV-10As and deployed to Vietnam in March, where the Broncos flew from two airfields in the Mekong Delta supporting U.S. and South Vietnamese riverine actions.

14 JANUARY • A fire erupted on board *Enterprise* (CVAN 65) while she trained off Hawaii en route to the Vietnam War. The exhaust from a No. 6 MD3A Aircraft Starter Unit overheated a Mk 32 Zuni rocket warhead on an F-4J Phantom II. The conflagration claimed 26 lives, two men were never recovered, and 371 sustained injuries. The fire destroyed 15 aircraft (eight F-4Js, six A-7B Corsair IIs, and an EKA-3B Skywarrior) and heavily damaged 14 (three F-4Js, three A-7Bs, two RA-5C Vigilantes, three EKA-3Bs, two E-2A Hawkeyes, and one UH-2C Seasprite). Frigate *Bainbridge* (DLGN 25), destroyers *Benjamin Stoddert* (DDG 22) and *Rogers* (DD 876), salvage ship *Deliver* (ARS 23), tugs *Hitchiti* (ATF 103) and *Moctobi* (ATF 105), and a Coast Guard vessel together with Navy, Coast Guard, and Air Force aircraft assisted. *Enterprise* completed repairs at Pearl Harbor Naval Shipyard and, on 11 March, continued her voyage.

27 JANUARY • Commander, Naval Air Systems Command directed the phase-out of the Naval Aviation Integrated Logistic Support (NAILS) Task Force. The force had made an in-depth study of aviation logistics with particular emphasis on spares and repair parts support management, and recommended the establishment of a NAILS Center.

3 FEBRUARY • The Naval Air Systems Command issued a contract to Grumman Corporation for the development of high-performance variable-sweep wing F-14A Tomcats to replace F-4 Phantom IIs, together with the manufacture of six experimental jets.

13 FEBRUARY • *Randolph* (CVS 15) was decommissioned and placed in the Reserve Fleet.

3 MARCH • Apollo 9 manned by James A. McDivitt, USAF, Col. David R. Scott, USAF, and civilian Russell L. Schweickart launched from John F. Kennedy Space Center, Fla. The astronauts accomplished all mission objectives, and on 13 March, the command module splashed down in the Atlantic about 180 miles east of the Bahamas. A helicopter



North Korean MiGs shoot down Deep Sea 129, an unarmed EC-121M, BuNo 135749, of VQ-1, similar to this Warning Star, killing all 31 crewmembers, 14 April 1969.

from HS-3 operating from amphibious assault ship *Guadalcanal* (LPH 7) recovered the astronauts.

14 APRIL • North Korean MiGs shot down Deep Sea 129, an unarmed VQ-1 EC-121M, BuNo 135749, while the *Constellation* flew a routine reconnaissance patrol from NAS Atsugi, Japan, in international airspace over the Sea of Japan near 41°12'N, 131°48'E. The attack killed all 31 crewmembers. The United States prepared contingency plans ranging from tactical air raids against North Korean military targets to aerial mining by A-6 Intruders operating from carriers, a blockade, or expanded strikes. On 16 April, the activation of Task Force 71 to protect such flights initially comprised *Enterprise* (CVAN 65) to sail in an area in the Sea of Japan designated Defender Station. Reinforcements at times included battleship *New Jersey* (BB 62), *Ranger* (CVA 61), and *Ticonderoga* (CVA 14). Negotiations gradually diffused the tension and, on 3 May, *Enterprise* turned for the East China Sea. From 25 to 27 May and on 6 June, *Kitty Hawk* (CVA 63) patrolled Defender Station.

7 MAY • Pilot Lt. Cmdr. Melvin J. Hartman, USCG, and copilot Lt. Larry Minor, USCG, in an HC-130H Hercules

designated Coast Guard No. 1453, flew the first Coast Guard aircraft directly over the geographic North Pole from CGAS Kodiak, Alaska. The record was achieved during an ice reconnaissance flight along a potential route to transport oil from the North Slope of Alaska by way of the Northwest Passage.

18 MAY • Apollo 10 crewed by Maj. Thomas P. Stafford, USAF, Cmdr. Eugene A. Cernan, and Lt. Cmdr. John W. Young launched from John F. Kennedy Space Center, Fla. This first lunar orbital mission with a complete spacecraft achieved all the primary mission objectives of evaluating performance and support. On 26 May, the command module splashed down in the Pacific about three miles from amphibious assault ship *Princeton* (LPH 5). A helicopter from HS-4 carried the astronauts to the ship.

26 MAY • A major development in carrier fire prevention occurred when *Franklin D. Roosevelt* (CVA 42) put to sea from Norfolk Naval Shipyard, Va., after an 11-month overhaul that included installation of a deck-edge spray system using a new seawater-compatible, fire-fighting chemical dubbed "Light Water."



The second YOV-10A Bronco light reconnaissance aircraft flies in the nondescript Tri-Service markings. The type was flown by the Marines, Navy, and Air Force.

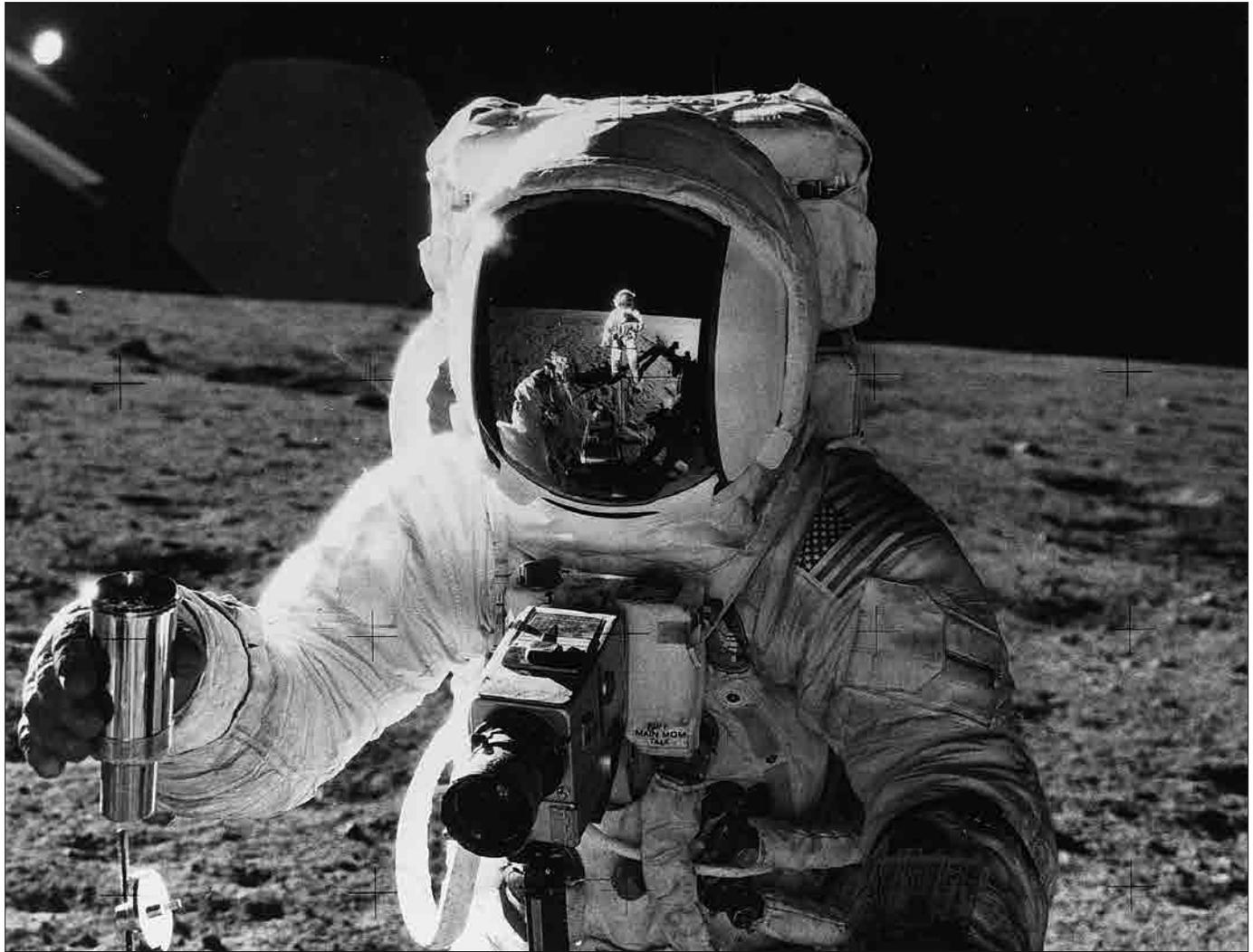
1 JUNE • Lt. Col. R. Lewis, USMC, and Maj. C. L. Phillips, USMC, broke a world record for point-to-point distance by a light turboprop aircraft during a 2,539.78 mile flight in an OV-10 Bronco from Stephenville, Newfoundland, to Mildenhall, England.

24 JUNE • Lt. Dean Smith and Lt. j.g. James Sherlock of VF-103 performed the first operational “hands off” arrested landing using the AN/SPN-42 Automatic Carrier Landing System in an F-4J Phantom II on board *Saratoga* (CVA 60). The AN/SPN-42 had emerged from the AN/SPN-10.

30 JUNE • *Essex* (CVS 9) was decommissioned and assigned to the Reserve Fleet.

14 JULY • Corsair II West Coast training squadron VA-122 at NAS Lemoore, Calif., received the first A-7E assigned to an operational squadron. A-7Es incorporated heads-up and map displays where vital information from flight and navigation instruments projected into the pilots’ normal field of vision permitted their concentration without looking down at instruments.

16 JULY • Apollo 11, crewed by Neil A. Armstrong, Col. Edwin E. Aldrin Jr., USAF, and Lt. Col. Michael Collins, USAF, launched from John F. Kennedy Space Center, Fla. On 20 July, Armstrong and Aldrin in lunar module *Eagle* separated from command and service module *Columbia* and descended to the moon. “Houston, Tranquility Base here—the *Eagle* has landed,” Armstrong reported to mission control when the lunar module touched down on the moon at 1618 EDT. At 2256 EDT, a naval aviator became the first person to walk on the moon when Armstrong stepped onto the surface. On 24 July, *Columbia* splashed down in the Pacific about 920 miles southwest of Honolulu, Hawaii, and 15 miles from primary recovery ship *Hornet* (CVS 12). Cmdr. Donald S. Jones, commanding officer of HS-4, piloted an SH-3D Sea King, BuNo 152711, designated Recovery One, that retrieved and carried the astronauts to *Hornet*. President Richard M. Nixon was on board the carrier and welcomed the astronauts through a window in their quarantine facility. The recovery force also retrieved *Columbia*. Apollo 11 achieved all the primary mission objectives.



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Apollo 12 astronaut Charles P. Conrad snaps a photograph of colleague Alan L. Bean during lunar soil collection activities on the Oceanus Procellarum in November 1969. Three of the first four men to walk on the moon, including Conrad and Bean, have flown for the Navy.

1 AUGUST • NAVAIR issued a contract to Lockheed-California Company for development of all weather carrier antisubmarine warfare S-3A Vikings to replace S-2 Trackers.

17 AUGUST • Hurricane Camille devastated the Gulf Coast with heavy rains and flooding that rendered many people homeless. The 16,500 servicemembers who supported emergency assistance in the wake of the disaster included HT-8, which evacuated more than 820 people on 20 August from Pass Christian, Miss. President Richard M. Nixon subsequently wrote HT-8 a letter praising the squadron for its services.

24 AUGUST • Icebreaker-oceanographic research vessel *Manhattan* sailed from Chester, Pa., to test the feasibility of

transporting oil from the North Slope of Alaska by way of the Northwest Passage. Aircraft and vessels that supported the expedition included a Coast Guard HC-130B Hercules, Coast Guard cutters *Northwind* (WAGB 282) and *Staten Island* (WAGB 278), and Canadian icebreakers *Louis S. St-Laurent* and *John A. Macdonald*. *Northwind* and *Staten Island* each normally embarked an HH-52A Seaguard. An NC-121K Constellation, BuNo 141325, of VXN-8 named *Arctic Fox*, provided ice surveillance for *Manhattan* through the Northwest Passage as part of Project Birdseye 6-69—an Arctic ice-survey mission initiated in March 1962 to gather ice flow information for the Naval Oceanographic Office. *Manhattan* returned to New York City on 30 October.



UH-1N Iroquois approach an LC-130 to refuel from the Hercules during operations in Antarctica. The Huey was first introduced to the continent during Operation Deep Freeze 72.

31 AUGUST • Two LC-130 Hercules of VXE-6 arrived at McMurdo Sound, Antarctica, six weeks in advance of the opening of Operation Deep Freeze 70. The passengers included Commander Naval Support Force Antarctica Rear Adm. David F. Welch and seven scientists.

1 SEPTEMBER • The Naval Aviation Integrated Logistic Support Center was established to provide intensified logistics management at NAS Patuxent River, Md.

23 SEPTEMBER • A UH-2B Seasprite operating from light cruiser *Galveston* (CLG 3) rescued 15 crewmen and passengers from Greek tanker *Angel Gabriel* after she ran aground and began to break up in a storm near St. Thomas Point, Marsascal, Malta.

30 SEPTEMBER • Carrier Anti-Submarine Air Group (CVSG) 57 was disestablished. The disestablishment of Carrier Air Wing 10 followed on 28 November and CVSG-52 on 15 December.

20 OCTOBER • *Ticonderoga* (CVA 14) underwent conversion to an antisubmarine warfare aircraft carrier (CVS 14) through 28 May 1970 at Long Beach Naval Shipyard, Calif.

22 OCTOBER • NAVAIR and the British government executed a memorandum of agreement concerning the purchase of Hawker-Siddely Harriers. A subsequent letter of offer covered the procurement of 12 AV-8As for the Marines with initial delivery scheduled for January 1971.



NH 69966

A CH-46A Sea Knight, BuNo 151911, of HMM-265 lands on board *Okinawa* (LPH 3) in 1968. The medium assault transport helicopter was designed specifically for Marine Corps requirements.

5 NOVEMBER • Liberian tanker *Keo* broke in half 30 miles east of Cape May, N.J. Two C-130 Hercules, frigate *Fox* (DLG 33), destroyers *Hugh Purvis* (DD 709) and *Leary* (DD 879), and two Coast Guard cutters attempted to rescue the crew, but all 36 perished.

14 NOVEMBER • Apollo 12 manned by the all-naval aviator crew of Cmdr. Charles Conrad Jr., Cmdr. Richard F. Gordon Jr., and Lt. Cmdr. Alan L. Bean launched from John F. Kennedy Space Center, Fla. On 18 November, Conrad and Bean separated Lunar Module 6 *Intrepid* from Gordon and Command and Service Module 108 *Yankee Clipper*, and the following day *Intrepid* landed on the moon's Ocean of Storms. After 31 ½ hours on the lunar surface, the astronauts and *Intrepid* rendezvoused with the command module. On 24 November, *Yankee Clipper* splashed down in mid-Pacific within five miles of primary recovery ship *Hornet* (CVS 12). An SH-3D Sea King from HS-4 lifted the astronauts to *Hornet*. Apollo 12 achieved all mission objectives.



NH 69966

A UH-46A Sea Knight, BuNo 150966, of HC-1 makes a vertical replenishment delivery.

1 DECEMBER • Amphibious assault ship *Boxer* (LPH 4) was decommissioned.