

The New Navy

1954–1959

In spite of the truce in Korea, peace in the world remained on unsteady footing. Within months, the worsening situation in the Far East, a series of crises in the Middle East, and a general deterioration in international relations gave new importance to the traditional practice of deploying naval forces to trouble spots of the world. As tension grew, hostility became open; and as international maneuverings led to incidents and demands which threatened world peace, naval forces were called upon to represent the nation in critical areas. On different occasions these forces evacuated refugees, patrolled troubled waters, provided support to menaced nations, and presented a physical symbol of freedom as a bulwark between the aggressor and the oppressed.

The period was also marked by technological and scientific advances of such magnitude that the Navy and Naval Aviation passed through a change greater than any in their previous history. The effective exploitation of these advances enhanced the speed, firepower, versatility, and mobility of naval, sea and air forces. Guns were being replaced by guided missiles, capability to deliver nuclear weapons was increased, aircraft speeds jumped from sub- to supersonic, the adaptation of nuclear power to aircraft was under investigation, and an increased knowledge of space gave evidence of its future effect on surface operations.

Guided missiles of several types were perfected and placed into operation. Air-to-air missiles became standard equipment on interceptors; a ground-support type was deployed by fleet squadrons. Air defense missiles were on board operating ships. Air-to-surface missiles were assigned to the Naval Air Reserve, and an interceptor missile was introduced into flight training. The fleet ballistic missile, Polaris, was deployed on nuclear-powered submarines.

A new class of carriers was built and the basic carrier modernization program was completed. Carrier forces, strengthened by these additions and improvements, operated a whole new family of aircraft with high performance capabilities. The successful application of nuclear power to ships of several types reached a new height by the construction of a new

carrier utilizing the advantages of this newfound source of power.

Accompanying the intensive application of technological advances were extensive reorganizations within the Navy Department by which greater emphasis was placed on research. New provisions were made for utilizing developments in space, and closely related activities in technical fields were brought together by the merger of two bureaus. Similar adjustments in the fleet provided a more uniform organization for carrier aviation, set up special task groups for the progressive improvement of antisubmarine tactics, provided completely equipped mobile amphibious squadrons ready to operate in the new tactics of vertical assault, and revised the Reserve program to provide units trained and equipped to perform specific tasks immediately upon mobilization.

All these advances in technology and all the improvements in weapons and equipment created a new Navy which paradoxically continued to play its traditional role in controlling the sea. Defense of the nation and of its commerce, deterrence of aggression, and readiness in time of war to destroy any active enemy power remained the Navy's basic tasks.

Events of the latter part of the 1950s were largely dominated by the space program. As a new age loomed upon the horizon, questions were raised and investigations made regarding the state of the nation's scientific attainment, the quality of its educational program, and the relative position of its progress in missilery. Successful orbits by Explorer I and Vanguard provided the first of a number of convincing answers. Within months, the orbit of man-made satellites became almost commonplace and the fantasy of man in space began to take on realistic form as tests demonstrated the feasibility of retrieving objects from orbit and an astronaut training program was launched.

1954

1 January The Naval Air Weapons Systems School was established at Jacksonville, Fla., to train cadres in

1954—Continued

maintenance of air-launched guided missiles, aircraft armament control systems, missile external control equipment, and bomb directors.

1 April The first transcontinental flights in less than four hours were made by three pilots of VF-21 in F9F Cougars in a 2,438-mile flight from San Diego, Calif., to Floyd Bennett Field, N.Y., with aerial refueling over Hutchinson, Kans. Lieutenant Commander Francis X. Brady made the crossing in 3 hours 45 minutes 30 seconds, Lieutenant (jg) John C. Barrow took 3 hours 46 minutes and 49 seconds, and Lieutenant W. Rich made it in 3 hours 48 minutes even. Official timers were not present.

19 April Model designations for airships were modified to conform with designations for heavier-than-air aircraft. Basically, the envelope designation letters “K” and “N” were replaced by manufacturer’s letters, standard suffix numbers and letters were uniformly applied and the patrol class of airships was divided into patrol and antisubmarine classes. Thus the ZPN became the ZPG-1 and the ZP2K became the ZSG-2.

25 May A ZPG-2 airship, commanded by Commander Marion H. Eppes, landed at NAS Key West, Fla., after a record breaking flight of 200.1 hours or more than eight days in the air. The flight, which began at NAS Lakehurst, N.J., ranged over the Atlantic as far north as Nova Scotia, out to Bermuda and Nassau and southward over the Caribbean and Gulf of Mexico. For his achievement on this flight, Commander Eppes was awarded the Distinguished Flying Cross and later the 1955 Harmon International Trophy for Aeronauts.

27 May The Chief of Naval Operations approved Project 125 of the carrier improvement program which in general provided for installing an angled deck, enclosing the bow to improve seaworthiness, and making other changes to further modernize the carriers that had completed the earlier Project 27A.

1 June Commander Henry J. Jackson, in an S2F-1, was catapulted from *Hancock* in the initial operational test of the C-11 steam catapult. As tests continued throughout the month, a total of 254 launchings were made with the S2F, AD-5, F2H-3, F2H-4, FJ-2, F7U-3 and F3D-2.

15 June To coordinate and guide the extensive aeronautical research, development, and material activities in the Fourth Naval District, including the Philadelphia, Pa., Johnsville, Pa., Trenton, N.J., and



First operation of steam catapult, Hancock launches an S2F-1 638785

Lakehurst, N.J., areas, the Naval Air Development and Material Center was established at Johnsville, Pa., Rear Admiral Selden B. Spangler, Commander.

22 July The XZS2G-1 (formerly XZP5K-1) made its first flight at Goodyear Aircraft Corporation, Akron, Ohio. This airship, designed as a replacement for the K Class airship, was fitted with inverted “Y” control surfaces.

26 July Two AD Skyraiders of Air Group 5 from *Philippine Sea* were attacked by two LA-7 type aircraft while searching for survivors of a Cathay Pacific airliner shot down three days before off Hainan Island. The AD pilots returned fire and splashed both attackers.

4 September A P2V of VP-19, on routine reconnaissance over international waters, was attacked by two MiG aircraft and forced to ditch off the Siberian coast. Nine of the crew escaped and were later rescued, but one went down with the plane.

31 October Ensign Duane L. Varner of VF-34 completed a 1,900-mile nonstop, nonrefueling, transcontinental flight from Los Alamitos, Calif., to Cecil Field, Fla., in 3 hours and 58 minutes in an F2H-2 Banshee.

1954—Continued



The S2F, Tracker anti-submarine search and attack plane, comes in for a landing on Valley Forge 1053776

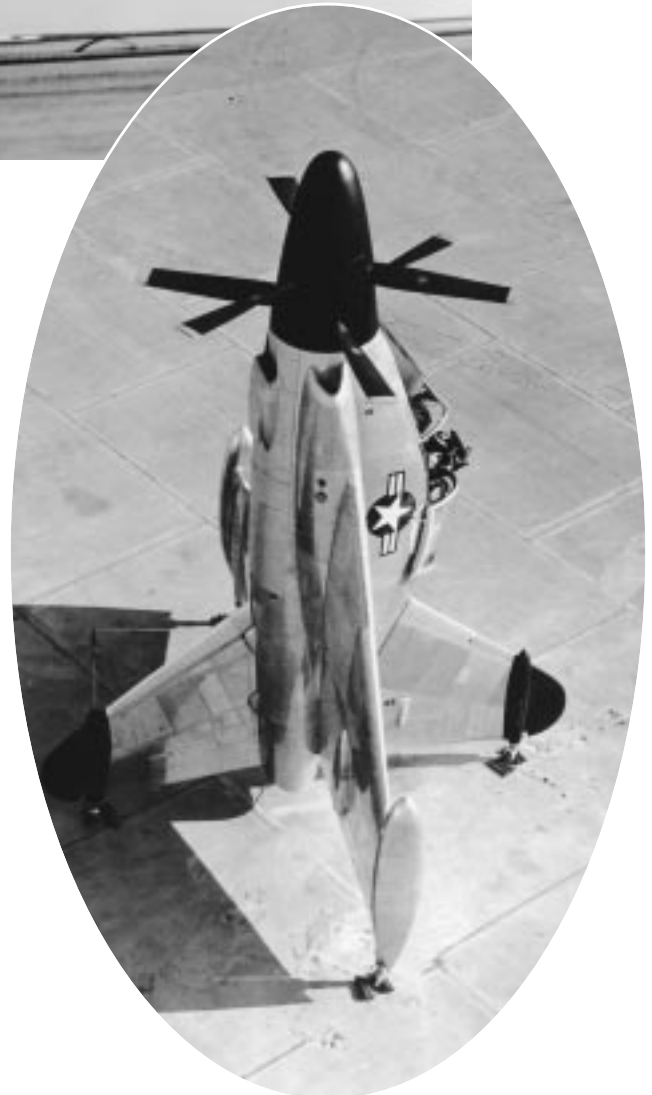
2 November The XFY-1 delta wing experimental fighter, piloted by J. F. Coleman, made a successful flight at NAS Moffett Field, Calif., consisting of vertical takeoff, transition to horizontal flight and return to vertical position for landing. The first free vertical takeoff had been made on 1 August. For his contribution to the art of flying in testing the XFY-1, Coleman was later awarded the Harmon International Trophy for 1955.

1955

17 January VX-6 was established at NAS Patuxent River, Md., for operations with Task Force 43 in Operation Deep Freeze. This squadron provided services for parties based ashore on Antarctica and made courier flights between that continent and New Zealand.

21 January The Flying Platform, a one-man helicopter of radical design, made its first flight at the Hiller plant in Palo Alto, Calif. Although the flight occurred during ground tests and was therefore accidental, it was successful in all respects.

27 January A North American FJ-3 Fury, piloted by Lieutenant Commander William J. Manby, Jr., of VF-33, set a new unofficial climb mark by reaching 10,000 feet from a standing start in 73.2 seconds at NAS Oceana, Va.



XFY-1, experimental vertical take-off fighter 709126

1955—Continued

1 February Task Force 43, Captain George J. Dufek commanding, was activated to plan Antarctic operations scheduled to begin in the fall under the code name Operation Deep Freeze. The mission of the force on its first expedition was to build facilities and airstrips and deliver supplies in support of U.S. participation in the International Geophysical Year 1957-58.

1 February VP-23 left Tarragona, Spain, for NAS Port Lyautey, Morocco, after six days of intensive training at the Spanish Military Air Base at Reus. This was the first operation of U.S. forces from bases in Spain.

6 February After steaming from the Atlantic to the Pacific around the Cape of Good Hope, *Midway* reported to Commander Task Force 77 for operations in the China Seas. This marked the first operation of ships of her class in the western Pacific.

12 February The evacuation of 24,000 military and civilian personnel of the Republic of China from the Tachen Islands, off the China coast, was completed without incident under cover of surface ships and carrier air of the Seventh Fleet.

13 February An F3H-1N Demon, piloted by McDonnell test pilot C. V. Braun, set the unofficial record for climb to 10,000 feet at 71 seconds.

16 February The Bureau of Aeronautics issued instructions describing new color schemes that would be used on all new Navy and Marine Corps aircraft beginning 1 July 1955 and applied on all currently operating aircraft within the next two years. The familiar sea blue was changed to light gull gray on top and glossy white below for carrier aircraft, all-over seaplane gray for water based aircraft and all-over light gull gray for helicopters. Bare aluminum was retained for utility types and land plane transports, the latter having in addition a solar heat reflecting white top. Orange-yellow remained the color for primary trainers, but the advanced trainer scheme was changed to international orange and insignia white. Other changes were olive drab above and glossy white below for land observation types and a combination of orange-yellow, engine gray and insignia red for target drones and target tow aircraft.

23 February An F4D Skyray, piloted by Douglas test pilot R. O. Rahn, reached 10,000 feet in 56 seconds, the fourth unofficial climb record set by Navy carrier fighters in less than a month.

24 February The Chief of Naval Operations directed that the term "angled" be used in lieu of "canted," "slanted," and "flamed," which had been used variously in describing the deck of aircraft carriers in which the landing runway was offset from the line of the keel.

24 February The first R3Y-1 Tradewind, a high-speed seaplane transport equipped with four Allison turboprop engines, was delivered to NATC Patuxent River, Md., for service suitability evaluation and trials. Intended for the long-range over-water transportation of military cargo, this plane was also suitable for use as a personnel or troop transport and for the air evacuation of wounded.

22 March A Navy R6D of VR-3, assigned to MATS, crashed and exploded at 0203 on Pali Kea Peak, 15 miles northwest of Honolulu, Hawaii, killing all on board. The 57 passengers and 9 crew members lost in this tragedy made it the worst heavier-than-air crash in naval aviation history.

25 March The Chance Vought XF8U-1, a jet carrier fighter, exceeded the speed of sound on its first flight, made at Edwards AFB.

4 April The Jet Transitional Training Unit was established at NAS Olathe, Kans., to provide student training for aviators transferring from shore to sea duty in the rank of commander and below. In addition to providing refresher training for these "desk pilots," the unit was responsible for training pilots making the transition from prop to jet type aircraft.

30 April Admiral John H. Towers, Naval Aviator No. 3, died. His long and distinguished career had begun on 26 June 1911, when he reported for flight instruction at the Curtiss Flying School, Hammondsport, N.Y., and extended through many important aviation and fleet commands including Chief of the Bureau of Aeronautics, Commander, Air Force Pacific, Commander, Second Carrier Task Force and Commander in Chief, Pacific Fleet. Upon his retirement from active duty on 1 December 1947, he was serving as Chairman of the General Board.

2 May The Navy announced the Aviation Officer Candidate Program, open to college graduates between the ages of 19 and 26. The new program paralleled the Aviation Cadet Program insofar as flight training was concerned, but in recognition of the higher scholastic attainment of its candidates, offered a commission as Ensign, USNR, upon completion of the four month preflight course.

1955—Continued



Vought F8U-2N Crusader, all-weather fighter is equipped with heat-seeking air-to-air missile Sidewinder 1061492



F8U steam catapult launch from Hancock 1053762

1955—Continued

5 May VP-1, with 12 P2V-5 Neptunes, returning from duty in the Far East by way of Asia, Europe, and North Africa, arrived at NAS Whidbey Island, Wash. Although a tour of duty separated the Pacific Ocean leg from the rest of the flight, this was the first round-the-world flight by a Navy squadron.

12 May The classification of naval vessels was revised to provide the designation CVHE for Escort Helicopter Aircraft Carrier and CVU for Utility Aircraft Carrier. The carriers were redesignated one month later.

1 June VQ-1, the first squadron of its type in the U.S. Navy, was established at NAS Iwakuni, Japan, with Lieutenant Commander Eugene R. Hall in command. First aircraft assigned were P4M-1Q Mercators.

22 June A P2V-5 Neptune of VP-9, while on patrol in the Aleutian area, was attacked by two MiG-15s, which set fire to the starboard engine and forced the Neptune to crash on St. Lawrence Island, near Gambell. There were no fatalities.

1 July NAAS Mayport, Fla., was established, completing the program begun in 1948 of converting the Jacksonville, Fla., area into a Fleet Aviation Center. Mayport provided docking facilities for carriers alongside the airstrip, thus permitting the rapid loading or unloading of special equipment and personnel and the easy movement of carrier air units ashore or afloat.

1 July *Thetis Bay*, in the process of conversion to its new mission, was reclassified as an assault Helicopter Aircraft Carrier and redesignated CVHA 1.

14 July The Martin P6M Seamaster, a swept-wing seaplane powered with four J-71 jet engines and in-



The XP6M-1 Seamaster, new water-based aircraft 1053800

corporating a new hull design, made its first flight. Designed for minelaying and reconnaissance tasks, and adaptable to other missions, this plane initially demonstrated great promise for the offensive potential of the operating forces.

22 August As VX-3 began operational evaluation of the mirror landing system installed on *Bennington*, Commanding Officer Commander Robert G. Dose, flying an FJ-3 Fury, made the first landing with the device. Two days later Lieutenant Commander Harding C. MacKnight made the first night landing in an F9F-8 Cougar. The squadron's favorable report formed the basis for a decision to procure the mirror landing system for installation on aircraft carriers and at certain shore stations.

12 September The Navy announced that all fighters in production would be fitted with gear for inflight refueling, thus establishing the technique as a standard operational procedure.

16 September Guided Missile Group ONE (GMGRU-1) was established at San Diego, Calif., to provide trained detachments to operate the Regulus assault missile from aircraft carriers and to support the employment of the Regulus on cruisers and submarines of the Pacific Fleet. Ten days later, GMGRU-2 was established at Chincoteague, Va., to provide the same services in the Atlantic Fleet.

27 September Navy responsibilities in connection with plans to launch an earth satellite during the International Geophysical Year (1957–1958), which included technical management of the Department of Defense portion of the program, were assigned to the Chief of Naval Research.

1 October *Forrestal*, the first of four ships of her class, was placed in commission at the Norfolk Naval Shipyard, Portsmouth, Va., Captain Roy L. Johnson in command.

10 October *Saipan* with HTU-1 aboard, left Tampico, Mexico, after a week of disaster relief operations for the inhabitants of the area. During these operations, the helicopters rescued 5,439 persons marooned on rooftops, trees and other retreats, and delivered 183,017 pounds of food and medical supplies, thus earning the commendation of the Task Group Commander and the best wishes of a thankful people.

11 October The Navy announced achievement of the initial step toward an eventual goal of monitoring surface weather in uninhabited portions of the world

1955—Continued



First carrier of a new class, Forrestal, was designed especially for operation of jet aircraft 709972

and thereby providing improved weather forecasting for use in both flight and surface operations. Automatic meteorological stations, developed by the Office of Naval Research and the Bureau of Aeronautics, were set adrift in the hurricane lanes north of Puerto Rico and provided continuous weather data on tropical storm Janet. Subsequent progress included a moored automatic weather station, one of which in September 1960 provided the first alert on tropical storm Ethel; unit stations on Antarctica, initially in 1956 but more successfully in 1960; and nuclear energy power as a source for data collection and transmission beginning in 1964.

15 October Lieutenant Gordon Gray, piloting a Douglas A4D-1 Skyhawk, broke the Class C world speed record for 500 kilometers with a speed of 695.163 mph at Muroc, Calif.

1 November *Boston* (CAG 1), Terrier missile ship and the world's first guided-missile cruiser, was placed in commission at the Philadelphia, Pa., Naval Shipyard, Captain Charles B. Martell commanding.

8 November The Secretary of Defense established a National Ballistic Missile Program, involving joint Army-Navy development of an intermediate range ballistic missile, for both shipboard and land-based operations. This resulted in Navy support for the Army's liquid-propellant missile, Jupiter, being developed at the Redstone Arsenal, Ala., in order to adapt it for use as a fleet ballistic missile.

9 November The Chief of Naval Operations informed the Chief of the Bureau of Ships of his intention to equip each angled-deck carrier with mirror landing systems and requested that equipment for 12 installations be procured during the fiscal years 1956 and 1957.

14 November The flagship of Rear Admiral George J. Dufek, Commander, Task Force 43, sailed from Norfolk, Va., for New Zealand to rendezvous with the ships of the task force for the southward voyage to Antarctica. Operating under the code name Operation Deep Freeze, the mission of this force was to establish bases on Antarctica for geophysical studies during the coming year.

1 December An element of Fleet All Weather Training Unit, Pacific (FAWTUPAC), was assigned to the Continental Air Defense Command to operate as a fighter-interceptor group under U.S. Air Force control. When FAWTUPAC was disestablished on 2 May 1958, this element was given squadron status and designated VF(AW)-3.

4 December On one flight of a project set up to evaluate the all-weather capabilities of airships,

1955—Continued

Lieutenant Commander Charles A. Mills operated a ZPG airship in the vicinity of South Weymouth, Mass., in an ice-accreting experiment unparalleled in lighter-than-air history. In spite of heavy airship icing, propeller icing, severe vibration and flying ice particles, Mills piloted his airship, directed the collection of data, returned to the field under instrument conditions, and made a ground-controlled approach landing in a manner that retained a maximum amount of ice on the ship for analysis on the ground. For his achievement on this and other flights during the evaluation, Lieutenant Commander Mills was awarded the 1956 Harmon International Trophy for Aeronauts.

20 December Two P2V Neptunes and two R5D Skymasters of VX-6 forged the first air link with the continent of Antarctica with a flight from Christchurch, New Zealand, to McMurdo Sound.

1956

3 January ZW-1, Commander John L. Mack commanding, was established at NAS Lakehurst, N.J.—the first lighter-than-air unit of its type.

10 January Airborne Early Warning Wing, Pacific, Captain Edward C. Renfro commanding, was established at NAS Barbers Point, Hawaii, to supervise and direct units flying defensive patrols protecting the continental United States and Hawaii against surprise attack.

7 March Fleet assignment of the F3H-2N Demon, all-weather fighter, began with the delivery of six F3H-2Ns to VF-14 at NAS Cecil Field.



An F3H-2N firing air-to-air Sparrow III missiles 1061490

12 March VA-83, equipped with F7U-3M Cutlass aircraft and Sparrow I missiles, departed Norfolk, Va., aboard *Intrepid* for duty in the Mediterranean in the first overseas deployment of a naval missile squadron.

12 March The Assistant Secretary of Defense for Research and Development established a titanium alloy sheet rolling program and designated the Bureau of Aeronautics as coordinator. Thereby an organized effort of the armed services and the titanium industry was established to improve titanium alloys with particular emphasis upon strength, uniformity and fabricating characteristics for use in aircraft and missiles.

20 March The Ballistic Missile Committee, Office of the Secretary of Defense, approved a Navy program for development of solid-propellant motors for use in ship-based ballistic missiles.

31 March Five A3D-1 aircraft were ferried from NAS Patuxent River, Md., to VAH-1 at NAS Jacksonville, Fla., completing the first delivery of Skywarriors to a fleet unit.

3 April The Navy announced that the Petrel, an air-to-surface guided missile designed for use by patrol aircraft against shipping, was in operational use from the P2V-6Ms of VP-24.

23 April Cognizance of Project Vanguard (an earth satellite launching program) within OPNAV was assigned to the Guided Missiles Division of DCNO (Air). The division was responsible for advising the Chief of Naval Operations on general aspects of the program, and supporting and assisting the Office of Naval Research in the resolution of problems, other than fiscal, arising within the Navy Department and at missile test activities of other services.

25 April The Chief of Naval Operations announced that mirror landing systems would be installed in the near future at all principal Naval Air Stations for improvement of air traffic control and reduction of landing accidents.

26 April The Naval Aircraft Factory at Philadelphia, Pa., was renamed the Naval Air Engineering Facility (Ships Installations) and its mission revised to include research, engineering, design, development, and limited manufacturing of devices and equipment for launching and recovering aircraft and guided missiles. Redesignation ceremonies on 1 June marked the passing of a name prominent in Naval Aviation since World War I.

1956—Continued



An A3D-2 aerial tanker, refuels an F4H-1 1042033



Equipment development encompasses all phases of Naval Aviation, mirror landing system brings in A3D 698382

29 May The ship designation system was modified to provide for use of the suffix “N” to identify vessels propelled by nuclear energy.

25 June U.S. Naval Ordnance Plant, Indianapolis, Ind., a facility devoted to research, development, production, and repair of aviation fire control equipment was redesignated U.S. Naval Avionics Facility. This facility had been established early in World War II for

development and production of aviation ordnance including the Norden bombsight. Its redesignation completed an internal Navy realignment whereby the Bureau of Ordnance had received complete responsibility for solid propellant rocket motors and the Bureau of Aeronautics had received complete responsibility for aviation fire control equipment.

27–28 June The first annual Fleet Air Gunnery Meet was held at NAAS El Centro, Calif. Six teams, selected from Navy and Marine Corps shore-based fighter units and composed of the squadron commander and three pilots, competed with two firings each at 15,000 and 25,000 feet. Top team honors and the Earle Trophy went to VF-112 of AirPac, and individual honors to Lieutenant (jg) H. N. Wellman of VF-43 of AirLant.

7 July VW-12 and Maintenance Squadron 2 were established at NAS Barbers Point, Hawaii, for patrol duty along the Pacific Distant Early Warning Line of the Continental Air Defense System.

12 July The Chief, Bureau of Aeronautics, approved a reorganization of the Office of Assistant Chief for Research and Development, whereby various technical divisions with closely related functions were re-grouped under appropriately titled officers. Thereby a

1956—Continued

reorganization of the entire bureau, which had been initiated a year earlier, was completed. This included the establishment of an Assistant Chief for Plans and Programs with a concomitant strengthening of planning functions and a division of the Material and Services group into two groups titled “Procurement” and “Maintenance and Support,” each under an Assistant Chief.

14 July In the initial overseas deployment of a Sidewinder missile unit, VA-46, equipped with F9F-8s, departed from Norfolk, Va., on *Randolph* for operations with the Sixth Fleet in the Mediterranean. Deployment of the Sidewinder was extended to the western Pacific the following month as VF-211, equipped with FJ-3s, departed the west coast on *Bon Homme Richard* for operations with the Seventh Fleet.

20 July *Thetis Bay* (CVHA 1), the first helicopter assault carrier, was commissioned at San Francisco, Calif., Captain Thomas W. South II, commanding. Formerly CVE 90, *Thetis Bay* was converted to operate helicopters and to accommodate 1,000 Marine combat troops to be flown ashore in the vertical development tactics of amphibious assault.

31 July An A3D Skywarrior, flown by Lieutenant Commanders P. Harwood and Alton R. Henson, and Lieutenant Roy R. Mears, demonstrated the performance capabilities of new carrier jet attack aircraft with a 3,200-mile nonstop, nonrefueling flight from Honolulu, Hawaii to Albuquerque, N. Mex., in 5 hours and 40 minutes, with an average speed of 570 mph.

15 August The Avionics Division was established in the Research and Development Group of the Bureau of Aeronautics with Captain William E. Sweeney as Director. Formed by a merger of the Electronics and Armament Divisions and the Navigation Branch of the Airborne Equipment Division, its establishment was both the direct result of a rapid expansion of electronics techniques in aviation armament and air navigation, and a recognition of the need for closely coordinated effort for their most effective application.

21 August An F8U-1 Crusader, piloted by Commander Robert W. Windsor, Jr., captured the Thompson Trophy with a new national speed record of 1,015.428 mph over the 15-kilometer course at Naval Ordnance Test Station, China Lake, Calif. This production model carrier fighter, equipped during its record performance with full armament of 20mm cannon and dummy ammunition, was the first opera-



Marine helicopter squadron HMR-362 demonstrates rescue at sea while operating with *Thetis Bay* 1053795

1956—Continued

tionally equipped jet plane in history to fly faster than 1,000 mph.

22 August Lieutenant Commander Virgil Solomon set down the Marianas Mars (JRM) on waters off NAS Alameda, Calif., after a flight from Honolulu, Hawaii, and completed the last scheduled passenger run for Mars aircraft.

22 August A P4M Mercator, while on night patrol out of Iwakuni, Japan, reported that it was under attack by aircraft over international waters, 32 miles off the China coast, and was not heard from again. Carrier



Cdr. R. W. Windsor in F8U-1 1061494

and land-based air and surface ships, searching for the plane, found wreckage, empty life rafts, and the bodies of two crew members.

30 August The Air Coordinating Committee approved a common military-civil short range air navigation system called VORTAC. This system consisted of a combination of the Navy developed TACAN (Tactical Air Navigation System) with the Civil Aeronautic Authority's VOR (Very High Frequency Omnidirectional range finder). The Air Coordinating Committee action resulted in the installation of ground beacons on the civil airways that served both civilian and military aircraft, each using their own specialized equipment.

1 September In the race for the North American Trophy, an event of the National Air Show, four FJ-3

Furies of VF-24 took off from *Shangri-La* at sea off the Pacific coast of Mexico and flew nonstop, 1,198 miles to Oklahoma City, Okla., without refueling. The winner was Lieutenant (jg) D. K. Grosshuesch, with a time of 2 hours 13 minutes 38.6 seconds for an average speed of 537.848 mph.

2 September On the second day of the National Air Show, Lieutenant (jg) R. Carson flying an F3H-2N Demon of VF-124 captured the McDonnell Trophy with a nonstop, nonrefueling flight from *Shangri-La* off San Francisco, Calif., to Oklahoma City, Okla., covering the 1,436 miles in 2 hours 32 minutes 13.45 seconds for an average speed of 566.007 mph.

3 September Two A3D Skywarriors, piloted by Captain John T. Blackburn, commanding Heavy Attack Wing 1 (HATWING-1), and Commander Charles T. Frohne, were launched from *Shangri-La* off the Oregon coast, flew across a finish line at the National Air Show, Oklahoma City, Okla., and continued on to Jacksonville, Fla., without refueling. In completing the 1,543.3-mile leg from the *Shangri-La* to Oklahoma City in 2 hours 32 minutes 39.7 seconds for an average speed of 606.557 mph, Captain Blackburn was awarded the Douglas Trophy. With this flight a 3-day demonstration of carrier mobility was completed, in which *Shangri-La* had launched aircraft to the same destination from widely separated points while moving from Mexico to Oregon.

21 September An F11F-1 Tiger, piloted by Grumman test pilot Tom Attridge, shot itself down while conducting test firings off eastern Long Island, N.Y., by running into 20mm projectiles it had fired only seconds before.



Test model of Grumman F11F-1, supersonic fighter 1011277

1956—Continued

2 October *Enterprise* was ordered stricken from the Navy list and put up for sale as scrap. Launched just 20 years before and commissioned 12 May 1938, she was in more action during World War II than any other carrier, was a pioneer in night combat operations, and was recipient of both the Presidential Unit Citation and the Navy Unit Commendation. Decommissioned in the demobilization period following the war, she was laid up with the Reserve Fleet at Bayonne, N.J., and never returned to active service.

5 October Three Cougar jets, piloted by Commanders Gerald A. Robinson and Donald Mitchie, and Ensign Ronald K. Hess of VF-144, made a round trip transcontinental flight from Miramar, Calif., to Long Island, N.Y., with fueling stops each way at Olathe, Kans., in an elapsed time of 10 hours 49 minutes 11 seconds. Although better than the existing record of 11 hours 18 minutes 27 seconds, the flight was not officially observed and therefore not officially recognized.

11 October An R6D-1 of Air Transport Squadron 6 on a scheduled MATS flight from Lakenheath, England, to Lajes in the Azores, disappeared over the Atlantic with 50 passengers and 9 crewmembers on board. Extensive search by ships and aircraft for the next 14 days found debris from the plane, but no survivors.

16 October Five students received Naval Observer Wings; the first graduates of the Navigator-Bombardier School at NAS Corpus Christi, Tex., which began 26 May.

29 October The Suez crisis erupted into open warfare and all major fleet units were sent to sea under conditions of maximum readiness. The Sixth Fleet, in the Mediterranean, was ordered to evacuate U.S. citizens from the area. Aircraft provided cover and heavy combatant ships stood by while ships and destroyers of the amphibious group and units of Air Force transport squadrons went into Alexandria, Egypt, Haifa, Tel Aviv, Israel, Amman, Jordan, and Damascus, Syria, and evacuated some 2,200 persons by 3 November. Operations by Sixth Fleet, in the area for several weeks, included the logistic support of the first UN International Forces which arrived in the area in November.

31 October Seven Navy men landed in an R4D Skytrain on the ice at the South Pole—the first to stand at the spot since Captain Robert F. Scott of the Royal Navy reached it in January 1912. The seven men were:



Crew of the first plane to land at South Pole, 31 October 1956. AD2 John P. Strider, RAdm. George J. Dufek, Lcdr. Conrad S. Shinn, Lt. John Swadner, AT2 William Cumbie, Capt. William M. Hawkes, and Capt Douglas L. L. Cordiner 805653

Rear Admiral George J. Dufek, Commander, Task Force 43 and Commander, Naval Support Forces, Antarctica; Captain Douglas L. L. Cordiner, C.O., VX-6; Captain William M. Hawkes, co-pilot; Lieutenant Commander Conrad S. Shinn, pilot; Lieutenant John Swadener, navigator; J. P. Strider, AD2, crew chief; and William Cumbie, AT2, radioman. The party remained at the pole for 49 minutes setting up navigational aids to assist the future delivery of materials and equipment for constructing a scientific observation station at the spot.

2 November The Navy announced award of a contract to Westinghouse Electric to design and furnish reactor components for a nuclear-powered aircraft carrier.

8 November A Navy Stratolab balloon, manned by Lieutenant Commanders Malcolm D. Ross and M. Lee Lewis, bettered the existing world altitude record by soaring to 76,000 feet over the Black Hills of South Dakota on a flight designed to gather meteorological, cosmic ray, and other scientific data necessary to improved safety at high altitudes. For this record ascent, the men were awarded the 1957 Harmon International Trophy for Aeronauts.

9 November A Sikorsky HR2S helicopter, piloted by Major Roy L. Anderson, USMC, at Windsor Locks, Conn., began a 3-day assault on world records, setting three new marks as follows: 9 November, carried a payload of 11,050 pounds to an altitude over 12,000 feet; 10 November, carried 13,250 pounds to over

1956—Continued



HR2S assault helicopter can lift three jeeps USMCA 150310

7,000 feet; and 11 November, set a speed record of 162.7 mph over a three-kilometer course.

29 November The ZSG-4, first airship fitted with a dacron envelope, made its first flight at NAS Lakehurst, N.J.

3 December *Compass Island* (EAG 153), the first ship converted to support the Fleet Ballistic Missile Program, was commissioned at the New York Naval Shipyard. On the same day the first Terrier missile destroyer, *Gyatt* (DD 712) was commissioned at Boston, Mass.

7 December The Secretary of Defense directed that air transport operations be placed under a Single Manager Service, and designated the Military Air Transport Service of the U.S. Air Force as its operating agency. This directive, which was implemented on 1 July 1957, required that the Navy transfer to this agency all of the transport aircraft it was operating under MATS and all four-engine land transports of the Fleet Logistic Air Wings except for 30 which could be retained for fleet service and administrative airlift.

8 December The Secretary of Defense authorized the Navy to proceed with the development of the solid-propellant Polaris Fleet Ballistic Missile as a sub-

marine-launched weapon system and to terminate its participation in the liquid-propellant Jupiter program.

8 December A Martin Viking rocket was successfully fired at Cape Canaveral, Fla., in a test of launching equipment, tracking, and telemetry instruments intended for the Vanguard earth satellite.



Firing a Polaris from George Washington 1053794

1956—Continued

17 December The WF-2 Tracer, a carrier early warning plane adapted from the TF-1 design, made its first flight at the Grumman plant, Peconic River, Long Island, N.Y.

1957

1 January The Naval Air Experimental Station, Philadelphia, Pa., one of the four subcommands grouped together to form the Naval Air Material Center (NAMC) in 1943, was disestablished and consolidated with the NAMC.

3 January The last operational Catalina, a PBY-6A of NARTU Atlanta, was ordered retired from service.

10 January The Naval Air Mine Defense Development Unit, established under an officer in charge on 31 August 1956, was established as a full command at Panama City, Fla., to develop and evaluate aviation systems, materials, and techniques for mine countermeasures.

14–24 January In an evaluation of their all-weather capability, ZPG airships of ZW-1, operating in relays from South Weymouth, Mass., maintained continuous radar patrol over the North Atlantic 200 miles off the New England coast through some of the worst storms experienced in the area in years.

18 January TF-1Qs, first naval aircraft equipped for electronics jamming, were first received by VA(AW)-35 at San Diego, Calif.

1 February Lieutenant Commander Frank H. Austin, Jr., MC, completed the Test Pilot Training Program at NATC Patuxent River, Md., and became the first Navy Flight Surgeon to qualify as a test pilot.

4 February The Chief of Naval Operations set forth a new policy for billet assignment which provided that aviators and nonaviators would be assigned alternately as either the senior or next senior officer of each important policy generating and administrative billet and that assignment to all billets of commander level and above would be filled by aviators and nonaviators in the ratio of their respective numbers on board.

9 February The Robertson Committee, chaired by the Deputy Secretary of Defense Reuben B. Robertson, Jr., and formed to study means of shortening the time required to develop aircraft, issued its final report. The committee concluded that through streamlining management and administrative processes and thereby eliminating wasted motion, the development of weapon systems could be accomplished in significantly less time than had been required since World War II. To this end, the services were taking specific action to correct a number of problems. Among the steps taken by the Navy were establishing program



The WF-2, a carrier-based early warning plane 1033433

1957—Continued

managers for each weapon program within the Bureau of Aeronautics and a Long Range Objectives Group in the Office of the Chief of Naval Operations.

21 February In recognition of the increasing importance of weather information to naval operations, the Naval Aerology Branch, OP-533, was given status as the Naval Weather Service Division, OP-58.

7 March A turbo-catapult, powered by the exhaust of six jet engines and designed primarily for use by Marine Corps expeditionary forces, launched its first aircraft at Georgetown, Del. The airplane, an AD-4NA, weighing 16,400 pounds and piloted by Joseph Barkley, all-American engineering test pilot, was launched at a speed of 90 knots in a run of 210 feet.

15 March A ZPG-2 airship, commanded by Commander Jack R. Hunt, landed at NAS Key West, Fla., after a flight that began 4 March at South Weymouth, Mass., and circled over the Atlantic Ocean toward Portugal, the African coast and back for a new world record in distance and endurance, covering 9,448 statute



ZPG-2 departs South Weymouth on a nonstop 11-day flight 1009746



Cdr. Hunt briefing ZPG-2 crew 1009749

miles and remaining airborne 264 hours 12 minutes without refueling. For his accomplishment in commanding the airship on this flight, Commander Hunt was awarded the 1958 Harmon International Trophy for Aeronauts.

21 March An A3D-1 Skywarrior, piloted by Commander Dale W. Cox, Jr., broke two transcontinental speed records; one for the round trip from Los Angeles, Calif., to New York, N.Y., in 9 hours 31 minutes 35.4 seconds; and the other for the east to west flight in 5 hours 12 minutes 39.24 seconds.

25 March The first F8U-1 Crusader was delivered to a fleet unit, VF-32, in the record time of two years after the first flight of the experimental model.

5 April In the Second Annual Naval Air Weapons Meet, VMF-314 won the Earle Trophy for first place in air gunnery, and VA-26 took the Kane Trophy for best in the air-to-ground competition. Best individual score of the meet was made by Commander Alexander Vraciu, Commanding Officer of VF-51 and Navy Ace in World War II.

12 April Scheduled production of the Sparrow I air-to-air missile was completed by the Sperry Farragut Company, Bristol, Tenn., with delivery of the last missile on order.

13 April Aviation officer distribution functions, performed by the Office of Deputy Chief of Naval

1957—Continued

Operations (Air) since its formation in 1943 and by the Bureau of Aeronautics prior to that time, were transferred to the Bureau of Naval Personnel.

21 April *Antietam* reported for duty to the Chief of Naval Air Training at Pensacola, Fla., providing that command with its first angled deck carrier for use in flight training.

25 April The Sixth Fleet sailed to the eastern Mediterranean, remaining for a week in a show of strength supporting the President's warning against the Communist threat to the independence of Jordan.

30 April The Naval Aviation Medical Center at Pensacola, Fla., was established, combining under a single command the clinical, training, and research functions of the Naval School of Aviation Medicine and the Pensacola Naval Hospital.

1 May A two-part rocket, made up from the first stage of a Viking and a prototype of a third stage, was launched from Cape Canaveral, Fla., in the second

successful test of the Vanguard earth satellite launching vehicle.

6 May ZPG-2W, an early-warning airship with a large radar antenna mounted within the envelope, made its first flight at Akron, Ohio.

17 May *Badoeng Strait*, the last escort carrier in service with the fleet, was decommissioned at Bremerton, Wash.

23 May A drone HTK-1 helicopter, carrying a safety pilot, operated from the fantail of *Mitscher* (DL 2) in the vicinity of Narragansett Bay, Mass. These tests and others, conducted in February off Key West, Fla., in which a piloted HUL-1 carried Mk 43 torpedoes in flights to and from *Mitscher*, demonstrated the feasibility of assigning torpedo carrying drone helicopters to destroyers and led to the development of the Drone Anti-Submarine Helicopter (DASH) which was later embodied in the QH-50C.

27 May The first T2V-1 Sea Star jet trainer was delivered to the Naval Air Advanced Training Command at Corpus Christi, Tex.

28 May In a reorganization of the Naval Air Reserve program, the Chief of Naval Operations directed that the 73 Auxiliary Air Units located throughout the country be disestablished during the next six months.

6 June Two F8U Crusaders and two A3D Skywarriors flew nonstop from *Bon Homme Richard* off the California coast to *Saratoga* off the east coast of Florida. This, the first carrier-to-carrier transcontinental flight, was completed by the F8Us in 3 hours 28 minutes and by the A3Ds in 4 hours 1 minute.

27 June Lieutenant Commander Malcolm D. Ross, USN, and Charles B. Moore of the Arthur D. Little Co., successfully completed a Stratolab balloon flight to investigate the interior of a thunderstorm, ascending from the top of Mount Withington near Socorro, N. Mex., into the towering cumulus cloud above the mountain. The flight was the first of a series conducted during the summer under the sponsorship of the Office of Naval Research and the Bureau of Aeronautics.

30 June A program to gather daily weather data over the Pacific, North America, and the Atlantic by the use of transosonde balloons was inaugurated with the release of the first balloon from NAS Iwakuni, Japan. Set to float at 30,000 feet, the balloons carried instruments which reported pressure and temperature every two hours. The duration of each flight was



*Launching
Vanguard,
May 1957
709847*

1957—Continued

planned for from five to eight days with the termination point somewhere in the Atlantic, short of the European coast.

15 July After the establishment of the Single Manager for Airlift Service, the Fleet Logistic Air Wings were abolished and transport squadrons not assigned to the Single Manager Service were redesignated Fleet Tactical Support Squadrons (VR) and reassigned to operate directly under the control of Fleet commanders.

16 July An F8U-1P Crusader (bureau number 144608), piloted by Major John H. Glenn, Jr., USMC, broke the transcontinental speed record with a crossing from Los Alamitos, Calif., to Floyd Bennett Field, N.Y. in 3 hours 22 minutes 50.05 seconds for an average speed of 723.517 mph. This was the first upper atmosphere supersonic flight from the West Coast to the East Coast.



Maj. J. H. Glenn crossed the continent at supersonic speed 1061493

16 July Two A3D Skywarriors, on a routine flight to join VAH-2 at NAS Barbers Point, Hawaii, made the Pacific flight from NAS Moffett Field, Calif., to Honolulu, Hawaii, in the record time of 4 hours 45 minutes.

30 July The first pilotless helicopter flight was made at Bloomfield, Conn. Built by Kaman Aircraft, under

joint Army-Navy contract, the new helicopter was designed on the basis of principles developed experimentally under Navy contract using a modified HTK.

30 July Air Force, Pacific Fleet, and Air Force, Atlantic Fleet, were retitled to become Naval Air Force, Pacific Fleet, and Naval Air Force, Atlantic Fleet.

12 August An F3D Skynight, with Lieutenant Commander Don Walker aboard, was landed on *Antietam*, at sea off Pensacola, Fla., by the Automatic Carrier Landing System. This landing began the first shipboard test of the system designed to bring planes aboard in all weather conditions without help from the pilot. In the period 12-20 August more than 50 fully automatic landings were completed.

27 August The Navy announced that all Naval Aviator candidates, except Aviation Cadets, entering flight training after 1 January 1958 would be obligated to serve 3½ years on active duty after completing the course instead of the 2 years previously required.

28 August The ground level ejection seat, designed and developed by the Martin-Baker Aircraft Co., Ltd., of England, and under evaluation by Grumman Aircraft for the Navy, was demonstrated at NAS Patuxent River, Md. A successful ejection was made by Lieutenant Sydney Hughes, RAF, from an F9F-8T flying just above the ground at 120 mph.

3 September The XKDT-1, a solid-propellant rocket-powered target drone, made its first flight in a launch from an F3H Demon over NAMTC Point Mugu, Calif.

28 September *Alameda County*, converted from LST 32, was redesignated an Advance Aviation Base ship, AVB 1. The first of her class, the new ship was designed to provide fuel, spare parts, technicians and facilities necessary to establish and operate an airstrip for patrol and carrier aircraft in locations where there were no base facilities.

30 September *Saipan*, last of the light carriers, was decommissioned.

1 October The Naval Air Test Facility (Ship Installations) was established at NAS Lakehurst, N.J., with Commander Richard M. Tunnell, commanding, to evaluate aircraft launching and recovery systems and to support their development.

11 October An A3D Skywarrior of VAH-4 bettered the mainland to Hawaii time with a control-tower to

1957—Continued



Test of Talos, supersonic surface-to-air missile 710376

control-tower flight from San Francisco, Calif., to Honolulu, Hawaii, in 4 hours 29 minutes 55 seconds.

15 October The Talos Defense Unit, a land-based version of the Talos shipboard missile system and designed to launch Talos missiles automatically, was accepted from the Radio Corporation of America by Rear Admiral Frederick S. Withington, Chief of the Bureau of Ordnance. It was turned over to Lieutenant General E. L. Cummings, Chief of Army Ordnance, for evaluation at the White Sands Proving Ground and possible use at Army anti-aircraft installations.

16 October *Lake Champlain*, with HMR-262 embarked, arrived at Valencia, Spain, to give aid to thousands made homeless by a flood.

13 November The 1,000-mile Regulus II bombardment missile was fired at Edwards AFB, Calif., in its first launch with rocket boosters. After a 48-minute flight, the 11-ton missile was returned to the field by control aircraft.

21 November Project Arowa was terminated and its personnel and records were transferred to the Navy Weather Research Facility, Norfolk, Va., which had been established the preceding month.

22 November The first Reserve Squadron to fire guided missiles as a part of its regular training, VP-834 from NAS Floyd Bennett Field, N.Y., completed two weeks training at NAS Chincoteague, Va., in which it fired Petrel air-to-surface missiles under the supervision of Guided Missile Unit 11.

9 December Cognizance of research and development programs for space vehicles was transferred from DCNO (Air) to ACNO (Research and Development) and responsibilities for what was formerly Project Vanguard were broadened to include all space vehicle programs prosecuted by the Office of Naval Research in the extension of, or following, Vanguard.

1958

9 January Pacific Fleet air units began delivery of emergency supplies to inhabitants of several islands in the Marshalls, severely damaged by typhoon Ophelia.

9 January *Princeton*, with Navy and Marine Corps aircraft embarked, and two destroyers from the Seventh Fleet and *Duxbury Bay* from the Middle East Force, ended seven days of relief operations for flood victims in Ceylon.

3 February The Chief, Bureau of Aeronautics, appointed a Weapons System Team to accelerate development and fleet introduction of the A2F (A-6) aircraft. This team was under the chairmanship of the program manager and staffed with representatives from Production, Maintenance and Contracts Divisions and the Research and Development Group. The latter representative, the R&D Project Officer (or class desk officer), was also chairman of an R&D Project Team which included representatives of Avionics, Airborne Equipment and Power Plant Divisions. This action and the assignment of systems management responsibilities to the airframe contractor marked important steps in the implementation of the management concepts recommended by the Robertson Committee.

4 February The keel of the world's first nuclear powered aircraft carrier, *Enterprise*, was laid at Newport News, Va.

13 February A selected Reserve was set up within the overall Reserve Organization to provide fully trained and equipped forces and units for direct and immediate deployment to specific active duty assignment upon the commencement of hostilities. The entire Naval Air Reserve was incorporated into the new organization.

14 February Operational evaluation of the air-to-air Sparrow III began as VX-4 fired the first missile.

1 March An early warning WV-2E prototype, with a rotodome radar antenna mounted on the fuselage, was accepted from Lockheed and assigned to the Naval Air

1958—Continued

Development Unit at NAS South Weymouth, Mass., for preliminary evaluation.

7 March *Grayback* (SSG 574), the first submarine built from keel up with guided-missile capability, was commissioned at Mare Island, Calif.

10 March The Chief of Naval Operations approved a reorganization of carrier aviation that would create uniform air groups, provide a more permanent group assignment to ships, and permit a reduction of assigned units and aircraft without also reducing combat readiness. The new organization also provided for a permanent replacement Air Group to be established on each coast and made responsible for the indoctrination of key maintenance personnel, the tactical training of aviators, and conducting special programs required for the introduction of new models of combat aircraft.

17 March A 3¼ pound earth satellite was placed in orbit by a Vanguard rocket fired from Cape Canaveral, Fla., in a test of the system designed for launching earth satellites for the International Geophysical Year. The highly successful scientific satellite, designed and developed under supervision of the Office of Naval Research, proved that the earth is slightly pear-shaped. Its solar-powered batteries continued to transmit for over 6 years and at last reports the satellite was expected to remain in orbit for as long as 2,000 years.

19 March VX-4 launched the first Bullpup missile, beginning its operational evaluation.

23 March In the first practical test of the Fleet Ballistic Missile underwater launching apparatus, a dummy Polaris missile was sent into the air off San Clemente Island, Calif.

2 April An important step in the development of the Drone Anti-Submarine Helicopter for operation from destroyers was taken as an existing Bureau of Aeronautics contract with Gyrodyne for the RON-1 rotocycle (one man helicopter) was amended to provide for the development, installation and flight test of remote control equipment.

8 April Airborne firing tests of HIPEG (High Performance External Gun) in F3H-2N aircraft commenced at Naval Aviation Ordnance Test Station, Chincoteague, Va. This twin-barreled, high-speed 20mm aircraft machine gun was developed for a pod installation on aircraft, thereby making it interchangeable with other aviation ordnance.

11 April Rear Admiral John S. Thach issued the first Operation Order to Task Group Alfa, formed in the Atlantic Fleet to accelerate the development of anti-submarine tactics and to improve fleet readiness in anti-submarine warfare. Admiral Thach is also remembered for the "Thach Weave," an aircraft tactic which he pioneered in World War II.

18 April In the Third Annual Naval Air Weapons Meet at El Centro, Calif., in which 15 specially selected squadrons participated, top honors in their class went to: VF-111 in air-to-air (day), VF-213 in air-to-air (all-weather), VA-126 in air-to-ground, and VAH-5 in heavy attack.

18 April Lieutenant Commander George C. Watkins, piloting an F11F-1F Tiger at Edwards AFB, Calif., broke the world altitude record for the second time in three days, this time setting the mark at 76,939 feet.

21 April To clarify command relationships and to permit the closer integration of Navy units into the



Task group alpha on parade portrays diversity and complexity of anti-submarine warfare equipment 1048502

1958—Continued

Single Manager Airlift Service, the Chief of Naval Operations directed that Navy squadrons be organized in Naval Air Transport Wings, one for the Pacific and another for the Atlantic.

4 May Practical test of an all-jet program in basic training began as 14 students reported to ATU-206 at Forrest Sherman Field, Pensacola, Fla., for instruction in the T2V Sea Star.

10 May Naval Missile Facility Point Arguello, Calif., was established as an activity of the National Pacific Missile Range.

11 May Lieutenant Commander Jack Neiman completed a 44-hour simulated high altitude flight in the pressure chamber at NAS Norfolk under conditions existing between 80,000 and 100,000 feet.

17 May Four F3H Demons and four F8U Crusaders completed nonstop trans-Atlantic crossings in Operation Pipeline, a practical test of the speed with which carrier aircraft could be delivered from the East Coast to the Sixth Fleet, in the Mediterranean.

22-23 May Major Edward N. LeFaivre, USMC, piloted an F4D-1 at NAMTC Point Mugu, Calif., to five world records in speed of climb to 3,000, 6,000, 9,000, 12,000, and 15,000 meters with marks of 44.392, 66.095, 90.025, 111.224, and 156.233 seconds.

26 May The HSS-1N helicopter, capable of day and night antisubmarine warfare under instrument flight conditions, was publicly flown at NAS Corpus Christi, Tex., by Sikorsky test pilot Jack Stultz.

27 May The twin jet F4H all-weather interceptor made its first flight at St. Louis, Mo., with R. C. Little, Chief Test Pilot for McDonnell Aircraft at the controls.

28 May *Galveston* (CLG 3), the first Talos missile cruiser, was placed in commission.

16 June The Pacific Missile Range, Point Mugu, Calif., was established under Navy management to provide range support to the Department of Defense and other government agencies in guided missiles, satellite and space vehicle research, development, evaluation, and training. This was the third National Missile Range to be established and the first from which a satellite could be safely fired into polar orbit.

20 June The Advanced Research Projects Agency (ARPA) requested the Naval Research Laboratory to modify its "Minitrack" system, which had been developed under Project Vanguard to produce a capability for detecting, identifying and predicting the orbits of nonradiating objects in space. Out of this request a Navy Space Surveillance System (SPASUR) was developed which began producing useful data in June 1959 and on 2 February 1960 established the existence of an unknown object in orbit and later identified it as the re-entry vehicle of *Discoverer V* which had been assumed lost.

26 June A TF-1 of VR-21 at San Diego, Calif., delivered a J-34 engine to *Yorktown* 300 miles at sea, in the first delivery of an aircraft engine by carrier-on-board delivery (COD).

1 July The Pacific extension of the Continental Air Defense Dewline went into full operation.

1 July Submarine Squadron 14, the first Fleet Ballistic Missile Submarine Squadron, was established under the Atlantic Fleet Submarine Force with Captain Norvell G. Ward, commanding.

1 July The first joint CAA-Navy Radar Air Traffic Control Center (RATCC) went into operation at NAS Miramar, Calif.



The F4H-1, McDonnell Phantom II, in which Cdr. L.E. Flint established a world altitude record of 98,560 ft. 710526

1958—Continued

15 July While aircraft from *Essex* and *Saratoga* flew cover from long range, and ships of the Sixth Fleet stood by, amphibious units landed 1,800 Marines on the beach near Beirut to support the Lebanese government and to protect American lives. In the days following, land, sea, and air reinforcements were sent to the area and order was maintained without untoward incident.

23–31 July The feasibility of creating or destroying cloud formations by release of carbon black into the atmosphere was established in tests conducted off the Florida coast by VW-4, commanded by Commander Nicholas Brango, under the overall direction of Dr. Florence W. van Straten of the Naval Weather Service Division, Op-58.

29 July Commander Malcolm D. Ross and Lieutenant Commander M. Lee Lewis made a balloon ascension to 82,000 feet, carrying a record load of 5,500 pounds and remaining in the air 34½ hours. The primary purpose of the flight was to test and evaluate the sealed cabin system designed to carry an externally mounted telescope for the observation of the atmosphere of Mars and was thus an operational and logistic rehearsal for coming events.

6 August The Department of Defense Reorganization Act of 1958 was approved. Effective six months from this date, the new law provided a more direct civilian control over military operations through the offices of the Secretary of Defense, the Joint Chiefs of Staff and the respective service secretaries; provided for the establishment of unified or specified combatant commands, to direct the operations of units assigned from the respective services, responsible for the accomplishment of their military mission directly to the President and the Secretary of Defense; and revised the secretarial structure of the Department by reducing the number of Assistant Secretaries of Defense from nine to seven, limiting the number within each service department to three, specifying that one of them be an Assistant Secretary for Financial Management, and revoked the statutory provision for an Assistant Secretary of the Navy for Air. The law also maintained the separate organization of each service under its own Secretary and defined the Navy Department as including Naval Aviation and the U.S. Marine Corps.

19 August In its first successful flight a Tartar surface-to-air missile, fired at the Naval Ordnance Test Station, China Lake, intercepted an F6F drone.

23 August An act of Congress created the Federal Aviation Agency and assigned it broad responsibilities involving operation of airways; the regulation of air traffic including military; and the establishment of airports and missile and rocket sites. The Act also provided for military participation in performance of the Agency's functions, for military deviations from air traffic regulations in an emergency, and for appeal to the President of disagreements concerning the location of military airports.



Norton Sound launches surface-to-air Tartar 710498

24 August After Chinese Communists began heavy shelling of the Kinmen Islands and there were renewed indications of naval activity in Taiwan Straits, units of the Seventh Fleet moved to the Taiwan area to support the Republic of China in a firm stand against aggression. As tension remained high and warlike action continued, ship reinforcements, including aircraft carriers, were sent to the area. By October the tension lessened and the situation became somewhat stabilized.

25 August Commander Forrest S. Petersen made his first flight in the X-15. Peterson was the Navy's research pilot in the NASA X-15 program. Between this date and 30 January 1962, he made five X-15 flights and logged about forty minutes. The X-15 program was a NASA effort to research the problems associated with controlled, manned aircraft flown at extreme altitude (as much as 250,000 feet) at Mach + speed (as much as 4,093 mph). Petersen's notable area of specialty in the program was exploration of the angle of attack envelope to obtain information on aerodynamic heating and stability and control.

1958—Continued

28 August As the situation in Lebanon was somewhat eased, *Essex* and four destroyers left the Sixth Fleet and transited the Suez Canal en route to join the Seventh Fleet forces off Taiwan, where tension was still high.

29 August The Lockheed Electra, selected in April as the plane most closely meeting requirements for long range antisubmarine warfare, made its first flight in the external configuration of the P3V-1.

1 September An Antisubmarine Warfare Laboratory was established at the Naval Air Development Center, Johnsville, Pa.

5 September A Coordinator, Missile Ranges, was established on the staff of the Deputy Chief of Naval Operations (Air) to serve as his principal advisor on missile range matters, to determine operating requirements, and to coordinate the establishment of policies relating to missile range use.

6 September *Norton Sound*, operating midway between the southern extremities of South America and Africa, fired its third and final atomic tipped rocket to an altitude of about 300 miles. This series of test firings, called Project Argus, had included shots on 27 and 30 August; it was conducted for the Advanced Research Projects Agency. The nuclear explosions produced a visible aurora and a radiation belt around the earth which extended 4,000 miles into space and lasted for several weeks, and provided highly significant scientific and military data.

8 September Lieutenant Richard H. Tabor, MC, wearing a Goodrich lightweight full-pressure suit, completed a 72-hour simulated flight in the pressure chamber at NAS Norfolk, in which he was subjected to altitude conditions as high as 139,000 feet.

15 September Lieutenant William P. Lawrence became the first Naval Aviator to fly at twice the speed of sound in a fleet-type aircraft, F8U-3 Crusader. Lawrence, the project officer, was on an evaluation flight at Edwards Air Force Base, Calif.

16 September In its first launch at sea, the Regulus II was fired from the submarine *Grayback* (SSG 574), off the California coast, and, under radio command, flown inland in a simulated bombardment to Edwards AFB, Calif.

28 September In a preliminary test of equipment to be used in IGY solar eclipse studies, an ASP rocket,

accelerated by a Nike missile booster, was fired from *Point Defiance* (LSD 31) near Puka Puka Island to 800,000 feet, the highest altitude ever reached by a ship-launched rocket.

30 September The final annual report of the National Advisory Committee for Aeronautics was issued by its Chairman, General James H. Doolittle. The forwarding letters pointed out that at the close of business that day, the NACA would cease to exist and that all facilities and employees would be absorbed by the National Aeronautics and Space Administration to be established the following day. Final Navy members were Vice Admiral William V. Davis, Jr., and Rear Admiral Wellington T. Hines.

30 September Operation Deep Freeze IV began as Rear Admiral George J. Dufek, Commander Naval Support Force, Antarctica, and four of his staff arrived at McMurdo Sound aboard an R5D of VX-6.

1 October Project Vanguard was transferred from the Navy to the National Aeronautics and Space Administration. The following 17 February, NASA successfully launched the first full scale Vanguard earth satellite.

8 October FJ-4Bs of VMA-212 and -214 landed at NAS Atsugi, Japan, after a trans-Pacific flight from MCAS Kaneohe, Hawaii, with layovers at Midway and Guam. Designated Operation Cannonball, the flight in two sections of 12 aircraft, refueled from Air Force KB-50 tankers in the vicinity of Wake Island and from Navy AJs near Iwo Jima.

10 October The terms “aerology” and “aerological officer” became obsolete as use of “meteorology” and “meteorological officer” in their place was directed by the Secretary of the Navy.

2 October To provide a highly mobile unit capable of employing Marine Corps helicopter squadrons and combat troops in the fast-landing concept of vertical envelopment, the Commander in Chief, Atlantic Fleet announced the formation of a new amphibious squadron composed of *Boxer*, and four LSDs equipped with helicopter platforms.

10 November The first permanent Marine Aviation Detachment afloat was activated on board *Boxer* to provide supply, maintenance, and flight deck control functions necessary to support the operations of Marine helicopter squadrons and combat troops assigned.

5 December *Observation Island* (EAG 154) equipped with launching, fire control, navigational,

1958—Continued

and other devices called for in the Fleet Ballistic Missile testing program, was commissioned at the Norfolk Naval Shipyard, Va.

5 December A sounding rocket, Hugo, fired from a Navy Terrier-type missile launcher at NASA's pilotless Aircraft Research Station at Wallops Island, Va. to a height of 86 miles, obtained the first extremely high altitude photographs of a frontal cloud formation. Project Hugo was conducted by the Office of Naval Research with assistance from Bureau of Aeronautics, NASA and the U.S. Weather Bureau and utilized a rocket camera package designed and constructed by New Mexico State University.

8 December The first firing of a Sparrow III air-to-air missile by a squadron deployed outside of the continental limits was conducted by VF-64, based aboard *Midway* and equipped with F3Hs. Eleven days later, VF-193, aboard *Bon Homme Richard*, conducted a similar exercise. Both squadrons were deployed with the Seventh Fleet in the western Pacific.

12 December The Secretary of the Navy directed termination of the Regulus II bombardment missile program as a measure necessary to achieve an overall balance in missile weapons systems within available resources.

16 December The Intermediate Range Ballistic Missile (IRBM) portion of the Pacific Missile Range, at Point Mugu, Calif., was inaugurated with the successful firing of a Thor from Vandenburg AFB, Calif.

19 December The Naval Air Missile Test Center, Point Mugu, Calif., was redesignated U.S. Naval Missile Center, Point Mugu, and placed under the military command of Commander, Pacific Missile Range.

28 December Nine ships of an antisubmarine group, including *Yorktown*, were diverted from operations at sea to aid the people of Koniya, Japan, made homeless by a fire which swept through the town and destroyed most of its dwellings. Within 24 hours of the disaster, the group delivered food, medicines, clothing, blankets, and tents to the needy. Men from the group assisted on the scene until Japanese relief agencies could cope with the situation.

1959

21 January Tests at Indianhead, Md., of a new type movable nozzle for the Polaris, demonstrated a successful major advance in the directional control of ballistic missiles.

24 January Major John P. Flynn and Captain Clifford D. Warfield of MAW-2, made a nonstop, nonrefueling flight in A4D Skyhawks from El Toro, Calif., to Cherry Point, N.C., covering 2,082 miles in 4 hours 25 minutes.

27 January The Naval Air Development and Material Command, Johnsville, Pa., was redesignated Naval Air Research and Development Activities Command, and its scope was expanded to include aeronautical research and development activities in the Third Naval District.

5 February In accordance with the provisions of the Defense Reorganization Act of 1958, the Office of Assistant Secretary of the Navy for Air was abolished. Functions of the office were assumed by the Secretary of the Navy pending an appointment to fill the newly created Office of Assistant Secretary for Research and Development.

16–19 February Units of the Naval Air Reserve participated for the first time in a full-scale fleet exercise. Fifty-five crews from selected Naval Air Reserve units and 36 P2V and S2F aircraft took part in an antisubmarine defense exercise on the West Coast with elements of the Pacific Fleet and the Canadian Navy.

24 February The operational deployment of the Talos missile was marked by its first firing at sea by *Galveston* (CL 93) in the vicinity of Roosevelt Roads, P.R.

10 March The Chief of Naval Operations approved transfer of LTA training from the Naval Air Training Command to Commander Naval Air Force, Atlantic and the cessation of the requirement that all LTA students also have HTA training.

11 March The HSS-2 amphibian all-weather antisubmarine warfare helicopter made its first flight piloted by Sikorsky test pilot R. S. Decker.

13 March Aviation Cadet E. R. Clark soloed in a TT-1 Pinto, the first student in Naval Aviation history to solo a jet without previous experience in propeller aircraft.

9 April Four Naval Aviators, Lieutenant Colonel John H. Glenn, USMC, Lieutenant Commander Walter M. Schirra, Lieutenant Commander Alan B. Shepard, Jr., and Lieutenant Malcolm Scott Carpenter, USN, were among the seven men selected as prospective astronauts under Project Mercury—a basic program in the development of space exploration and manned orbital flight.

15–22 April Elements of the Naval Air Reserve took part in Exercise Slamex, conducted by Commander,

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The HSS-2 Sikorsky all-weather ASW helicopter 710394

Antisubmarine Defense Force, Atlantic—their second participation in a fullscale fleet exercise since the organization of the Selected Reserve. Operating from Naval Air Stations at Brunswick, Maine; Quonset Point, and Lakehurst, N.J., with P2V and S2F aircraft, 78 crews from 12 Reserve stations conducted round-the-clock flight operations for seven days, logged 2,800 accident-free flight hours, maintained an aircraft availability of better than 85 percent and reported 75 submarine contacts.

25 April Bullpup was first deployed overseas when VA-212, equipped with FJ-4B Furies, sailed from Alameda, Calif. on board *Lexington* to join the Seventh Fleet in the western Pacific. The following August, VA-34, equipped with A4Ds sailed from the East Coast aboard *Saratoga* to join the Sixth Fleet, thus extending Bullpup deployment to the Mediterranean.

26 April HU-2 pilots of the ice breaker *Edisto* (AG 89) homeward bound from the Antarctic, completed

Bullpup air-to-surface missiles are carried by FJ-4B 710127



1959—Continued

10 days of rescue operations in the Montevideo area of Uruguay during which they carried 277 flood victims to safety.

28 April The office of the Assistant Chief of Naval Operations (Research and Development) was disestablished and replaced by a new Deputy Chief of Naval Operations (Development), with authority and responsibility to execute the research, development, test, and evaluation responsibilities of the Chief of Naval Operations. Vice Admiral John T. Hayward, who was head of the disestablished office, became the new Deputy for Development.

5 May The Guided Missiles Division was transferred in its entirety from DCNO (Air) to the newly established office of DCNO (Development), and its Director was designated Assistant Chief of Naval Operations (Development).

7 May The classification of 36 escort carriers, designated CVE, CVU, and CVHE, was changed to AKV, Cargo Ship and Aircraft Ferry. The change was accompanied by a change of hull numbers and marked the end of the escort carrier as a combatant ship of the U.S. Navy.

15 May The classification of four support carriers (CVS) and seven light carriers (CVL) was changed to Auxiliary Aircraft Transport (AVT). This change removed the CVL designation from the Navy Vessels Register.

15 May To centralize and strengthen the research and development program, more direct channels for technical control and program guidance over the Operational Development Force were established in the Office of the Chief of Naval Operations. The mission of the force was revised and broadened to include test and evaluation and, reflected the changes, its title was changed to "Operational Test and Evaluation Force."

26 May A concept of aircraft maintenance, which provided for the assignment of responsibility directly to the unit having custody of the aircraft and for a gradual elimination of FASRONS, was approved for implementation.

27 May As a reflection of the ever-broadening scope of a unit which owed its beginning to the needs of Naval Aviation, the Naval Weather Service Division, with its functions and personnel, was transferred from DCNO (Air) to DCNO (Fleet Operations and Readiness.)

8 June The bombardment missile Regulus I, fired by the submarine *Barbero* (SS 317) 100 miles off the Florida coast, delivered a package of Post Office mail ashore at Mayport, Fla., after a 22-minute flight.

16 June A P4M Mercator, on a routine flight over international waters off Korea, was fired upon by two MiGs. The attack wounded one crewman and so damaged the plane that it made an emergency landing at Miho, Japan, with both starboard engines and some of the flight controls inoperative.

19 June A ZPG-3W, first of four airships designed for use in air warning patrol and largest nonrigid ever built, was delivered to NAS Lakehurst, N.J.

11 July The Marine Aviation Cadet program was reinstated after a lapse of 18 years as a class of 12 MarCads began their preflight training course at NAS Pensacola, Fla.

13 July The Chief of Naval Operations approved the policy recommendations of the Connolly Board that enunciated organizational responsibilities in the Office of the Chief of Naval Operations. Essentials of the policy were that the Navy would use space to accomplish naval objectives, that it would participate fully in space technology and that astronautics would have high priority in overall research and development.

14 July A two-stage Nike-Asp solid-propellant rocket fired from Naval Missile Facility, Point Arguello, Calif., was the first of 12 designed to record radiation 150 miles up and also the first ballistic missile fired from the new facility.

15 July The Aviation Safety Division of DCNO (Air) was changed to a staff office, headed by a coordinator, to act as principal advisor to DCNO (Air) in all matters of air safety and to coordinate the planning and implementation of aviation safety programs throughout the Navy.

22 July Within DCNO (Air), the Office of the Coordinator, Missile Ranges was disestablished and its functions assigned to a simultaneously established Astronautics Division, charged with assisting DCNO (Air) in performing his overall responsibility for directing the Navy astronautic program, including the formulation of plans, policies, and the determination of requirements.

28 July The Naval Research Laboratory issued its initial report indicating the feasibility of adapting Omega navigation to aircraft use. This report, prepared by A.

1959—Continued

F. Thornhill of the Radio Division, was a theoretical analysis of the problems involved in designing an airborne receiver. It also described Omega navigation as a phase comparison radio navigation technique utilizing very low frequency radio waves of such range that six appropriately located shore based transmitters would provide world wide coverage.

30 July The Navy announced that Advanced Training Command units and Reserve squadrons would receive Sidewinder air-to-air missiles. The following week the program was implemented when the Advanced Training Unit 203, at NAAS Kingsville, Tex., began training operations carrying Sidewinders on their F11F jets.

*Sidewinder air-to-air missiles on
F9F-8 Cougar 699330*



3 August The first flight test of the antisubmarine missile Subroc was successfully completed by a launch from a shore installation at NOTS China Lake, Calif.

18 August An act of Congress established the Bureau of Naval Weapons and provided that the Bureaus of Aeronautics and Ordnance would be abolished upon transfer of all their functions.

20 August Marine Helicopter Squadron 261, operating from *Thetis Bay*, completed a week of relief operations in

flood-stricken Taiwan during which it airlifted 1,600,540 pounds of cargo and 833 passengers on 898 missions.

25 August During suitability trials on board *Independence* an A3D piloted by Lieutenant Commander Ed Decker took off at a gross weight of 84,000 pounds—the heaviest aircraft ever to take off from a carrier.

27 August The ballistic missile Polaris was fired for the first time from a ship at sea by *Observation Island*, off Cape Canaveral, Fla.

1 September The Bureau of Naval Weapons was formed. The first Chief of the new bureau, Rear Admiral Paul D. Strop, took the oath of office on 10 September.

9 September Navy air and surface units located and recovered an Atlas boosted Mercury capsule in an area 700 miles short of the predicted point of impact in the Atlantic Ocean.

18 September The Air Warfare Division of DCNO (Air) was disestablished and its functions pertaining to aviation combat readiness were transferred to DCNO (Fleet Operations and Readiness). A new branch was established in the Aviation Plans Division to perform planning requirement functions previously assigned to the disestablished division.

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25 September The last class of LTA students also qualified in HTA, completed training at NAS Glynco, Ga. The last man to receive the dual designation was Ensign John B. Hall.

30 September Airship flights by the Reserves of Naval Air Reserve Training Unit, Lakehurst, N.J., marked the end of the airship training program conducted for 12 years under the Chief of Naval Air Reserve Training.

1 October An R5D Skymaster, piloted by Lieutenant Commander John A. Henning of VX-6, arrived at NAF McMurdo Sound, Antarctica, after a flight from Christchurch, New Zealand. The arrival of Rear Admiral David M. Tyree, Commander, Naval Support Force Antarctica, on this first flight of the season marked the operational implementation of Operation Deep Freeze 60.

1 October Fleet Air San Diego was established with Rear Admiral Dale Harris in command.

6 October *Kearsarge* left Nagoya, Japan, after relief operations in the wake of a typhoon. Some 6,000 persons were evacuated, 200,000 pounds of supplies and medicines were delivered and over 17,000 typhoid and antibiotic shots were administered to prevent the spread of disease.

2 November A student training flight at NAS Pensacola, Fla., by 2nd Lieutenant David K. Mosher,

USMC, and his instructor Lieutenant Commander Rieman A. MacDonell, inaugurated use of the T2J Buckeye in basic training.

30 November The Airship Training Group at NAS Glynco, Ga., was disestablished ending lighter-than-air training in the U.S. Navy.

1 December The Bureau of Aeronautics and Ordnance were abolished as the Chief of the Bureau of Naval Weapons Rear Admiral Paul D. Stroop relieved their Chiefs, Rear Admirals Robert E. Dixon and Miles H. Hubbard, and the Bureau of Naval Weapons absorbed their functions.



WEPS Chief, Stroop relieves Chiefs BuAer-BuOrd, Dixon and Hubbard 710604



The T2J-1, advanced trainer by North American 1061491

1959—Continued



The XF2Y-1, hydro ski fighter, during taxi trials 708780



An XF4D-1 lands aboard Coral Sea during trials 63014

*A3D is
launched by
Forrestal's
steam cata-
pult 1053799*

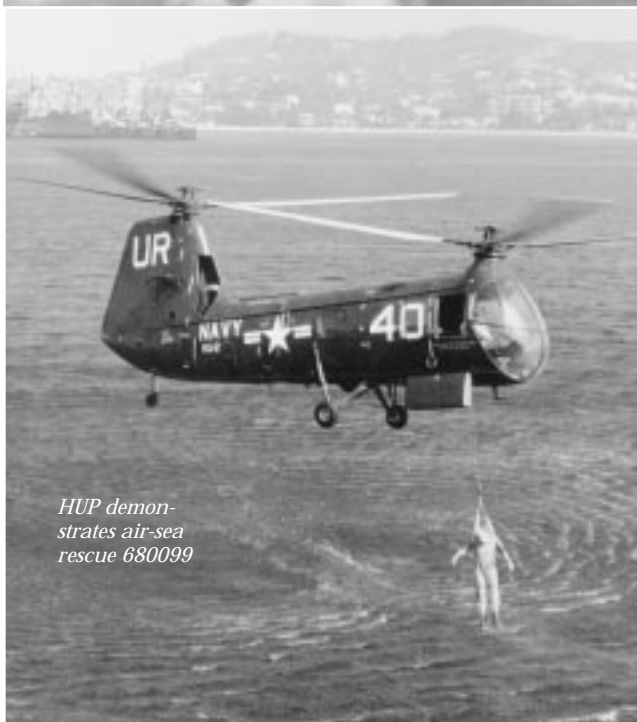


Carrier light attack plane, the Douglas A4D-1 1006922

1959—Continued



The A3J-1, Vigilante, all-weather attack plane, designed to deliver weapons from high or low altitude 1039888



HUP demonstrates air-sea rescue 680099

4 December Crack teams from selected fleet squadrons completed four days of competitive gunnery, bombing, and missile firing at MCAAS Yuma, Ariz., in the championship round of the annual weapons meet. VF(AW)-3 took the all weather fighter title in the F4D Class and VF-41 won it in F3H Class. VMF-232 won the day fighter competition; VA-56 the

jet light attack; VA-85 the prop light attack; and VAH-4 the heavy attack. Top individual scorer was 1st Lieutenant G. A. Davis, USMC, of VMF-232 competing in the Day Fighter shoot.

6 December Commander Lawrence E. Flint, Jr., USN, piloting a McDonnell F4H-1 Phantom II powered by two GE J-79 engines bettered the existing world altitude record by reaching 98,560 feet over Edwards AFB, Calif.

7 December *Dewey* (DLG 14), the first of a new class of guided missile destroyer leaders designed to employ the air defense missile Terrier III, was commissioned at the Boston Naval Shipyard, Mass.

30 December The first Fleet Ballistic Missile submarine *George Washington* (SSBN 598) was placed in commission at Groton, Conn., Commander George B. Osborn commanding. The first of nine nuclear powered ballistic missile submarines authorized by Congress, she was launched on 9 June 1959.



*Guided missile ship Mississippi fires
Terrier surface-to-air missile 659363*



HSL anti-submarine helicopter 1053761



Saratoga on duty with the Sixth Fleet in the Mediterranean, departs from August Bay, Sicily 1038502



Coral Sea, Midway and Hancock at NAS Alameda, a huge industrial complex linking shore to sea 1053763



Sinews of the Sixth Fleet, Intrepid and Independence prepare at Norfolk for duty in Mediterranean 1053764