NAVAL AVIATION NEWS

48th Year of Publication

FEBRUARY 1967

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WHEN DAY IS DONE . . .

. . . on a carrier in the South China Sea, there is still more to be done. There is no quiet hour. People must be fed; aircraft armed, fueled, repaired and scrubbed. There are engines to be kept peaked. And it takes hundreds of men working around the clock to keep the schedule. Away from the line, there are at-sea meetings with service ships to receive another load for another delivery cycle. It's a busy, crowded, important job.

NAVAL AVIATION NEWS

FORTY-EIGHTH YEAR OF PUBLICATION FEBRUARY 1967

■ IN THIS ISSUE

The Year in Review 6 — *Aviation Historian Adrian O. Van Wyen takes his annual look at the year gone by and, particularly, what it meant to Naval Aviation.*

Booming Business 12 — *In the carrier Constellation, ordnance requirements keep crewmen hopping.*

Standing Trial 14 — *The Navy's newest attack aircraft, the A-7A Corsair II, undergoes stiff BIS service acceptance trials.*

Helo Haven 22 — *If you're in a helicopter that's been ripped apart by enemy fire, you're in serious trouble—right? Wrong—if, that is, your helo is equipped with a new capsular escape system.*

Pooped Pilots? 37 — *At the Naval Missile Center, Point Mugu, they're studying problems relating to fatigue and stress.*

■ THE STAFF

■ COVERS

Cover craft for February is the A-7A Corsair II on the catapult of the USS America, the ship used for carrier BIS trials. On the back cover, shot by JOC Jim Ferrell, a Chinese Communist junk strikes a sharp contrast to the attack carrier USS F. D. Roosevelt.

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NAVAL AVIATION NEWS

VT-1 Trains Last NavCad

Ens. Porter Marks End of Era

When he completed the portion of his basic flight training provided by VT-1 at NAAS SAUFLEY FIELD, Pensacola, NavCad Gene L. Porter marked the end of an era. He was the last of his kind to be trained by VT-1.

With NavCad Porter's departure for NAAS MERIDIAN, Miss., for jet indoctrination in the T-2B *Buckeye*, the word was out that the only trainees coming to VT-1 in the foreseeable future will be NROTC, AOC, Naval Academy and Fleet types.

NavCad Porter's home town is Oak Harbor, Wash., and he is a graduate of Everett Junior College. He entered the service May 4, 1966.

After reporting to Saufley, NavCad Porter received his solo certificate after his 13th flight in the T-34B *Mentor* November 17, 1966. He is shown in the accompanying photo being congratulated by Commander A. E. Geist, VT-1's C.O., after his last *Mentor* flight.

NAVCAD PORTER CONGRATULATED

The prospective jet pilot was scheduled for advanced training at NAS CORPUS CHRISTI, Tex., after completing his stay at Meridian.

Radio Course is Transferred

FAETU's to Train Code Operators

The Airborne Radio Code Operators Course (Class C), NATTC MEMPHIS, was disestablished December 12, 1966, when Class 646 graduated. Operators are now being trained in the Fleet Airborne Electronics Training Units.

The course, designed to train code operators to a proficiency of eight groups per minute, was established in April 1960. Since then, 1,725 operators have been trained at NATTC.

FAA Announces New Rules

Amends 'Chute Jump Regulations

New parachuting rules, which will provide additional safeguards for both jumpers and airplanes, have been announced by the Federal Aviation Agency.

The new safety regulations, which are to take effect March 24, 1967, require jump aircraft to have two-way voice radio equipment whenever jumping operations are to be conducted in "controlled airspace" (areas under the jurisdiction of air traffic control facilities).

Pilots of jump aircraft are to

WITH THE INTRODUCTION *of the big, cargo-carrying CH-53A, retrieving non-operational aircraft is going to become standard operating procedure. In the pictures above, the Naval Air Test Center at Patuxent River demonstrates successful airlifts of the A-1 Skyraider and the A-4 Skyhawk. The A-4B was lifted from Norfolk to USS Randolph, 20 miles at sea, and back by an NATC CH-53A.*

monitor continuously FAA air traffic control or flight service station radio voice channels, beginning not less than five minutes before jumping starts.

By listening to the nearest FAA facility, the pilot of the jump plane and the FAA personnel will be able to relay information on other aircraft and receive messages on the progress of jump activities.

Whereas current regulations call for a six-hour notification of jump activities in controlled airspace, the new rules will require only one-hour advance notice.

Current rules, which remain in effect, require authorization only for jumps in the control zones of airports with control towers and in the airspace above 24,000 feet which is designated "positive control airspace."

Flight Pay Rules Revised

Overtime Can be Banked for Pay

Naval Aviators and others entitled to incentive pay have been cleared to put up to five months of flight time into the "bank" for pay purposes.

Under revised aviation pay regulations approved by Defense in November, the flight time garnered by an airman applies:

First, to the flight requirements for the month in which flown,

Second, to those months past in which no time was flown, and

Finally, time flown in excess of monthly requirements may be used for up to five months into the future.

This regulation, outlined in SECNAV Instruction 7220.58 of December 21, 1966, has no application to temporary flight orders, either "definite" or "indefinite." It also does not apply to Naval Air Reserves on active duty for training less than 30 days or on inactive duty training.

New Barracks for Memphis

'Study Atmosphere' is One Goal

New enlisted barracks for NAS MEMPHIS are scheduled to be built with a target date for the first two in January 1968. Thereafter there will be two additional barracks every 60 days until the eight are completed the first of July, 1968.

The new, four-story, permanent structures are intended to relieve the present crowded conditions. They are part of Navy's long-range plans to replace eventually a group of wooden buildings which were built as "temporary" living quarters and classrooms during the WW II build-up in 1942.

According to a Navy spokesman, the new barracks will be more efficient and conducive to a "study atmosphere" for Naval Aviation Technician Trainees.

Featuring a decor more modern than any previously exhibited at Navy Memphis, the new buildings will be constructed of reinforced concrete. Each will house 210 men and will form part of a three-unit compound with more than 53,100 square feet of total living and structure space. Two barracks will flank a plaza with a recreation lounge and utilities building. A hub of landscaping, parking areas and walkways will surround the compounds. Designs call for more than 125 square feet of structure space per man.

FIRST JET *on ice to support the Navy's Operation Deep Freeze '67 was the USAF's Starlifter which carried in 25,000 pounds of supplies and 28 passengers—only a partial load for the big Lockheed plane. The flight was an historic first for a fanjet transport. Rear Admiral Fred E. Bakutis, Deep Freeze commander, who was aboard the C-141, congratulated Capt. Howard Geddes of Travis AF Base, California, upon the extremely smooth flight.*

With the advent of modern technology, Navy officials point out, it takes more know-how and training to operate equipment. The aim in the present building plans at Memphis is to provide better living and study conditions in order to provide more efficient and better trained teams for the Fleet.

New Phantoms at Oceana

Welcomed by the 'Grim Reapers'

Christmas arrived two days early for the *Grim Reapers* of VF-101 Det. Oceana when, on December 23, they became the first activity based at NAS OCEANA, Va., to receive the new F-4J.

The F-4J is the most recent Navy version of the familiar *Phantom,* easily recognizable because of the absence of the infrared "chin" below the nose radome. Its beefed-up landing gear increases the aircraft's maximum landing weight.

A more sophisticated weapon systems and more powerful J-79 engines are scheduled for the F-4J's though they are not installed in the first ones delivered.

GRAMPAW PETTIBONE

Brakes Break

This *Intruder* flight, scheduled as an engine acceleration test, had all the outward appearances of a routine hop. The pilot had previously accumulated enough time in this model to be well qualified, but his B/N (bombardier/navigator), also a pilot, was experiencing his first ride in the A-6.

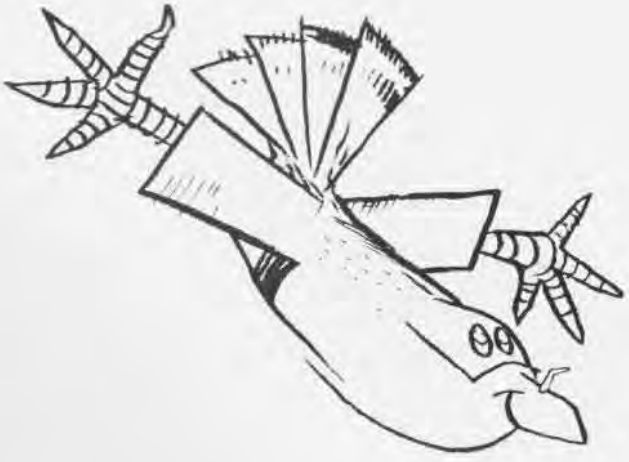
Upon completing the pre-flight inspection, the pilot rebriefed his B/N on ejection seat procedures. While doing so, he noted the B/N did not have the proper oxygen mask. After they strapped in, he also noted that the B/N did not have a torso harness adapted for the A-6. After a little improvisation, they decided the flight could be conducted safely if they remained at a low altitude.

Start, taxi and takeoff were uneventful so they climbed to 28,000 feet in order to log military rated thrust (MRT) time on the engine. Next, they made an idle descent to about 2,000 feet in the vicinity of an uninhabited island. A run was made over the island from the south at approximately 1,500 feet altitude, between 325 to 350 knots, preparatory to low-altitude, accelerating runs at MRT.

As they passed over the island, the pilot pulled the nose of the airplane up, selected speed brakes out and reduced power to idle. During the decelerating wing-over maneuver, he lowered flaps and elected to commence the high-speed runs on a southerly heading over the bay at 500 feet. The rate of descent was approximately 1,500 feet per minute and air speed about 150 knots. As he approached his desired round-out altitude of 800 to 1,000 feet, he brought the nose up to the horizon and simultaneously added power he considered adequate for level flight. The sink rate was reduced slightly by the increased nose-up attitude but, as the air speed decreased another 10-15 knots, it became apparent that the desired response was not present and the pilot selected maximum power on both engines of his *Intruder*.

He next selected flaps up to reduce drag but completely forgot that the speed brakes were fully extended. He signalled immediately for the B/N to eject and the pilot himself ejected. (At this point he realized the extended speed brakes were causing the deceleration but it was too late to do anything about it.)

The ejections occurred at approximately 100 feet altitude, 120 knots, with the aircraft descending about 600 feet per minute in a wings-level attitude. The plane continued to settle, hit the water, tore off the underhanging fuel tanks and slid up on a marshy island. The two pilots landed about 30 feet and 100 feet to the right of the aircraft. Sustaining moderate injuries, they were recovered in short order and heloed to the hospital.



Grampaw Pettibone says:

Oh, my achin' bones! The fog count in the cockpit must'a been pretty high. It's a pretty well-known fact in *Intruder* circles that the bird don't hold level flight so good with the brakes out and, even without a brake position indicator, the message should'a come through loud and clear.

There ain't much doubt in my mind that these fellas pushed their luck envelope to its limit, I'll bet they do more than kick the tires and light the fires next time.

ILLUSTRATED BY Oblom

Phantom Phable

The flight briefing commenced at 0715. Ens. Nugget (newly designated Naval Aviator) informed his instructor that he had difficulty with ground controlled approaches on his previous instrument flight, so a considerable portion of the brief was devoted to the technique of flying a GCA pattern in the F-4.

He was briefed to concentrate first on heading and get it under control within two degrees. The second step was to lock airspeed after the aircraft was in the landing configuration. During the transition to landing configuration, he was not to worry about precise altitude control but concentrate on heading and airspeed. Airspeeds on final were briefed to be 145-50 knots on the first approach and 140-45 on second. Ens. Nugget made written notes on this technique. This portion of the briefing was conducted in about 20 minutes.

The RIO's (radar intercept officers) joined the briefing and the conduct of the flight was outlined. The flight was a canned (preplanned) IFR round-robin with a penetration and GCA to a missed approach at an en route Air Force base.

The flight did not commence well. Ens. Nugget dropped full, vice half, flaps for the section takeoff which caused his wingman to reduce power to 90% to avoid over-running. Airborne at 0903, the flight turned left and headed directly for a restricted area. (Nugget said he was unable to synchronize his compass.) A frequency shift to center control and heavy radio traffic hindered the instructor getting his student to turn and the restricted area was thoroughly violated.

The climb and cruise portion of the flight with the exception of rough nose and altitude control was O.K. and, after an hour and ten minutes on simulated instruments, the flight arrived at the initial penetration fix and commenced a TACAN penetration with GCA to the en route Air Force base. Altitude and azimuth control was good; however, airspeed was varied between 160 and 130 knots.

Approaching 600 feet on glide slope, Nugget was reminded by his RIO to remove the instrument hood at 500 feet. As the driver started to remove the hood, he noted that he was at 600 feet vice 500 and attempted to re-install the hood. As he was doing this, the F-4 slowed and the nose abruptly came up. The *Phantom* stalled, the right wing and nose dropped, and the instrument hood fell over the instrument panel.

The RIO called "Attitude-attitude," on the ICS while the chase pilot called "Power-power." Ens. Nugget responded by adding military power and initiated recovery.

Meanwhile, in the rear cockpit, the helpless RIO, noting 25° nose down on the attitude gyro, initiated the ejection sequence by reaching for the face curtain. The pilot recovered to a level attitude and notified the RIO all was well a microsecond prior to the latter's ejection from the aircraft. Too late.

Almost simultaneously with the RIO's departure, the *Phantom's* nose came up and again entered a stalled or nearly stalled condition. A second recovery was effected and a positive climb established. (Both stalls and recoveries were made with the instrument hood covering the panel; the final recovery altitude was estimated to be 200 feet.)

The instructor joined his student, climbed to the landing pattern altitude and coached the lad to a normal landing at the Air Force base while initiating and directing SAR (search and rescue) efforts.

The RIO, who sustained moderate injuries as a result of the ejection, was promptly picked up by a helicopter and flown directly to the hospital.

Grampaw Pettibone says:

Holy mackerel! This one really shakes the dew off the lily. I ain't about to say that instrument hood is the neatest thing since sliced bread, but I will say this youngster and his instructor RIO could've had a little better working agreement. One heck of a lot of F-4 drivers use that hood and their RIO's don't walk home. Nugget mistook the prep signal for an execution, but it didn't have to turn wormy right then.

A little more coaching from the rear seat, an absolute minimum airspeed, and just a little more vigilance from all hands could'a prevented this revoltin' development.

Memo from Gramps

There once was a 'Torn Tiger' (NANews, December 1966, p. 5) and he made a forced landin' right on Gramps' head. Wowee, it smarts! As it should be, Gramps enjoys a certain amount of academic freedom as well as anonymity. In writin' up that tale, Gramps was torn betwixt handin' out orchids to the pilot or servin' up homily á la Pettibone. Homily won the toss. But it's been "homily grits" ever since, with many, many people tellin' Gramps that structural fatigue was the *real* reason for that Tiger's downfall. Okay. Gramps, with bloodied ears and an achin' ego, admits his fryin' pan was on the wrong burner. But, honest injun, all he wanted was to impress on our youngsters the fact that old flyin' machines, like old china, can't take G's like they could when they were new. As Gramps' favorite song says, "That's life! I've been a pawn . . . and a king."

A-4 SKYHAWKS *of Attack Squadron 64 over the USS America (CVA-66) in the Mediterranean. Newest attack carrier in the Fleet, America returned to Norfolk in July after her first operational deployment, having served a seven-month tour of duty with Sixth Fleet.*

THE 1966 NAVAL AVIATION REVIEW

By Adrian O. Van Wyen, Historian, DCNO(Air)

THE FIFTY-FIFTH YEAR of Naval Aviation was in many respects a repeat of the year before. World attention remained focused on Southeast Asia where the portent of events was not always clear and the problem of ending hostilities remained the dilemma it had been for over a year. Continued support of the nation's efforts to aid the people of South Vietnam in forming a government of their own choosing required heavy commitments of ships and men which again posed problems, particularly in logistic support. Aircraft operating from five attack carriers maintained in the Southeast Asia area provided a large share of the attack sorties flown by U.S. forces against targets in North and South Vietnam. During the year, ten different attack carriers, five antisubmarine carriers, four amphibious assault ships and three seaplane tenders served in various elements of Seventh Fleet operating in the cause of freedom from waters of the South China Sea.

Support of the nation's space effort also matched the high of the previous year. Navy ships recovered the first unmanned capsule of the *Apollo* series and five *Gemini* spacecraft, the last of which ended a highly successful program. Naval Aviators were again among those selected for participation in future space programs. The Navy's *Transit*, oldest operating satellite, marked its fifth year in orbit.

The strength of Naval Aviation was about the same. There was a small decrease in aircraft on hand, a slight build-up of aviation personnel and a small drop in the number of pilots on board. One attack carrier started a lengthy modernization period. One antisubmarine carrier was retired. One amphibious assault ship joined the Fleet; the keel was laid for another. Three new aircraft models were delivered to Fleet units and advanced versions of existing fighter and attack aircraft made first flights. A new air-to-air missile passed its first full-scale flight test.

As the year began, the President's peace ambassadors were making the rounds of world capitals, the bombing of North Vietnam had been halted but war in the South ran on. The United States put the first full-time weather satellite in orbit; the Soviet Union made the first soft landing on the moon. Tensions were rising in the Middle East. Red China was at odds with Indonesia and the Soviet Union. President DeGaulle took issue with the aims of NATO. A Senate group began hearings on the war in Vietnam. We sent wheat to fight famine in India. Safety on the highways became a national issue.

JANUARY

13—USS *Bon Homme Richard* and CVW-19 returned to San Diego after a nine-month deployment off Vietnam with a record of over 12,000 combat sorties and 11,000 tons of ordnance dropped.

22—USNS *Corpus Christi Bay*, the former seaplane tender *Albemarle*, arrived at Corpus Christi, Texas, after completion of extensive modification which fitted her as an aircraft repair and maintenance ship for Army aviation units operating in the forward areas.

In January, Headquarters & Maintenance Squadron 30 (H&MS-30) was activated.

FEBRUARY

7—The first E-2A *Hawkeye* assigned to the Atlantic Fleet was accepted at Norfolk by VAW-12.

11—The Secretary of the Navy designated 1966 as the 50th anniversary year of the Naval Air Reserve.

15—USS *Midway* (CVA-41) was decommissioned at Hunter's Point prior to extensive modernization.

16—The name *New Orleans* was assigned to LPH-11, the construction of which would begin in March.

21—A two-day test of a water distillation plant run on nuclear power was completed at McMurdo Station, Antarctica. The plant, which can produce 11 gallons of fresh water per minute, was built to replace the costly and less efficient snow melters previously used.

26—The first unmanned capsule of the *Apollo* series, fired into space by a *Saturn IB* rocket from Cape Kennedy, was recovered in the southeast Atlantic near Ascension Island by USS *Boxer* (LPH-4).

MARCH

2—USS *Constellation* began receiving pictures from weather satellite *Essa II*. Her equipment, which includes tracking gear that compensates for ship movement, gives a pictorial indication of major weather patterns permitting more accurate forecasts than otherwise possible. An earlier operational evaluation of the system by USS *Saratoga* with the experimental *Nimbus* began in late 1963.

15—A reorganization of the Office of the DCNO (Air) became effective splitting the former Aviation Plans Division into two divisions titled "Aviation Plans and Requirements" and "Aviation Programs," creating Program Director billets and establishing an Aviation Maintenance and Readiness Branch.

16—The destroyer USS *Leonard F. Mason* recovered astronauts Neil A. Armstrong and David R. Scott in *Gemini VIII* who, after completing the first space docking with another satellite, experienced control difficulties which required an emergency landing in the Pacific 500 miles east of Okinawa.

23—USS *Hornet*, with Carrier Antisubmarine Air Group 57 on board, returned to North Island after a seven-month deployment with Seventh Fleet. On this tour, the performance of HS-2 earned it a Navy Unit Commendation.

31—Flight test of a Helicopter Capsule Escape System at El Centro proved the feasibility of its use during inflight emergencies. The system separates the in-

USS HANCOCK *(CVA-19) and USS Davis (DD-937) refuel from the USS Sacramento (AOE-1) while steaming in the South China Sea off Vietnam. The performance of Hancock and her Air Wing 21 on this combat tour merited award of the Navy Unit Commendation.*

ANGEL 52 OF HS-2: *The squadron received the Navy Unit Commendation for outstanding service in S.E. Asia while aboard Hornet.*

habited section of the fuselage from the helicopter and recovers it intact (see page 22).

In March, Naval Air Transport Wing, Atlantic, was disestablished.

In the second quarter, political crisis and civil disorder in Vietnam threatened the entire war effort. Here, demonstrations against war and against the draft reached violent proportions. The White House held a conference on civil rights, gunfire met rights marchers in the south, "black power" and "white backlash" became bywords. LSD acquired national prominence. Surveyor I made a soft landing on the moon in full view of a fascinated TV audience. DeGaulle continued his attack on NATO. The Organization of American States voted to withdraw troops from the Dominican Republic.

APRIL

4—NASA announced selection of 19 men for the Astronaut Team, among whom were 11 who had qualified as Naval Aviators including six Navy and two Marines on active duty and one member of the Naval Air Reserve.

7—USS *Forrestal*, with Carrier Air Wing Eight on board, arrived in Norfolk after a tour of duty with Sixth Fleet in the Mediterranean.

10—Two Navy men began spinning at four rpm in the Coriolis Acceleration Platform of the Naval Aerospace Medical Institute at Pensacola, in a four-day test to determine the ability of humans to adapt to a new form of rotation such as may be used in space stations to produce artificial gravity.

15—It was announced that the 1965 accident rate of 1.22 per 10,000 flight hours was the lowest ever achieved during a calendar year. Excluding losses by enemy action, the number of accidents was 54 less and the dollar loss 49 million lower than the year before.

18—A reorganization of Naval Air Training Command Schools at NAS PENSACOLA abolished the Naval Pre-Flight School and set up six existing schools under a Naval Aviation Schools Command.

29—The small seaplane tender USS *Duxbury Bay* was decommissioned at Norfolk after 21 years of continuous service in the Fleet.

MAY

1—A reorganization of the Navy Department became effective; it placed material, medical and personnel supporting organizations under 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 titled: Air, Ships, Electronics, Ordnance, Supply, and Facilities Engineering.

2—USS *Lake Champlain* (CVS-39), the last "straight deck" carrier in service, was decommissioned and placed in the Reserve Fleet at Philadelphia.

THE TRI-SERVICE *XC-142A V/STOL landing aboard USS Bennington during carrier suitability trials at sea off San Diego in May.*

9—The first guided flight of the *Phoenix* air-to-air missile was successful at Point Mugu.

11—VAdm. Frederick L. Ashworth relieved VAdm. William E. Ellis as Commander Sixth Fleet.

11—The commanding officer of MAG-12 piloted an A-4 *Skyhawk* on a catapult launch from the Marine Expeditionary Airfield at Chu Lai, Vietnam. It was the first combat use of the new land-based catapult capable of launching fully loaded tactical aircraft from runways less than 3,000 feet long.

13—USS *Ticonderoga* with Air Wing Five arrived at San Diego after duty with Seventh Fleet off Vietnam. From first action on 5 November 1965, *Ticonderoga* launched strike sorties on 115 days in the five and one-half months of her operational deployment.

17—The Douglas TA-4F, training version of the *Skyhawk*, was provisionally accepted for service and two days later the first of the model was delivered to VA-125 at NAS LEMOORE, Calif.

18—The XC-142A tri-service V/STOL transport made its first carrier takeoffs and landings during tests conducted aboard USS *Bennington* at sea off San Diego. The tests, including 44 short and six vertical takeoffs, were made with wind over the deck varying from zero

to 32 knots. Navy, Marine and Army pilots took turns at the controls.

27—The F-4J, latest and most advanced model of the *Phantom II* series, made its first public flight at St. Louis, piloted by Ray Hunt of McDonnell.

In May, CVSG-58 and component squadrons VS-26, VS-36 and HS-7 were decommissioned.

JUNE

6—USS *Wasp* (CVS-18) recovered *Gemini IX* astronauts Thomas Stafford and Eugene Cernan 345 miles east of Cape Kennedy after their 72-hour space flight on which they made rendezvous with another satellite and Cernan spent over an hour walking in space.

8—A C-130 *Hercules*, piloted by Cdr. Marion Morris of VX-6 based at NAS QUONSET POINT, returned to Christchurch, N.Z., after a flight to McMurdo Station, Antarctica, to evacuate Robert L. Mayfield, UT2, who had received critical injuries in a fall. It was the third emergency air evacuation from Antarctica during the winter night since *Deep Freeze* began.

9—The seaplane tender USS *Pine Island* returned to San Diego after a tour with Seventh Fleet and operations in Southeast Asia.

USS ENTERPRISE *arrived at Alameda in June after a convincing show of the advantages of nuclear power in combat off Vietnam.*

13—USS *Kitty Hawk* with Air Wing Eleven on board, arrived at San Diego after a tour with Seventh Fleet off Vietnam. For operations in a six-month period, beginning 26 November 1965 and extending to 14 May 1966, the carrier was later awarded the Navy Unit Commendation.

21—USS *Enterprise* arrived at Alameda after a combat tour with Seventh Fleet off Vietnam. In the six-month period from 2 Dec. 1965 to 7 June 1966, the carrier demonstrated the inherent advantages of nuclear power for sustained operations, while the planes of her all-jet air wing, CVW-9, completed over 13,000 combat sorties and delivered over 8,500 tons of ordnance on enemy targets.

29—The Navy's navigational satellite, *Transit IV-A*, incorporating the first nuclear power generator used in space, marked its fifth anniversary in orbit.

In the third quarter, action in Vietnam became heavier as efforts toward peace increased. India proposed a plan, the President made new offers to Red China, our ambassador to the UN, announced that we would consider peace negotiations on terms set by the Secretary General, but the proposals fell on deaf ears. Election in Vietnam set up its first freely elected body and marked a start toward constitutional government. Border incidents shook the Middle East. Ideological dispute broke out among civil rights leaders. Racial violence in San Francisco slums capped a summer of riots in cities across the nation; the civil rights bill died in the Senate. A major strike crippled the air lines and air transportation.

JULY

10—USS *America* with Air Wing Six on board returned to Norfolk after a tour with Sixth Fleet in the Mediterranean.

21—USS *Guadalcanal* (LPH-7) recovered *Gemini X* astronauts John W. Young and Michael Collins after their landing 460 miles east of Cape Kennedy. The astronauts had spent more than 70 hours in space, had docked with an *Agena* satellite and Collins had made a space stand and taken a space walk.

25—The Chief of Naval Operations announced *F. D. Roosevelt* (CVA-42), *Bennington* (CVS-20) and *Okinawa* (LPH-3) as winners of the Admiral Flatley Memorial Award, presented annually for outstanding achievement in aircraft accident prevention during carrier operations.

27—USS *Yorktown*, with CVSG-55 on board, returned to San Diego after operations with Seventh Fleet in the western Pacific.

In July VF-174 was redesignated VA-174; VMT-2 became VMT-103.

AUGUST

1—USS *Hancock* with Air Wing 21 on board arrived at Alameda after an eight-month deployment with Seventh Fleet in which her aircraft flew more

THE A-7A CORSAIR II, *latest aircraft designed for the attack and close support role, was delivered first to VA-174 in October.*

LAST *of the Gemini series about to splash down 600 miles southeast of Cape Kennedy.*

GEMINI XII *astronauts ready to be picked up for delivery to USS Wasp in the distance.*

ASTRONAUTS *Edwin Aldrin and James Lovell aboard Wasp after 95 hours in space.*

than 11,000 strike sorties and dropped more than 8,000 tons of ordnance on targets in Vietnam.

6—USS *Tripoli* (LPH-10) was commissioned at Philadelphia.

25—USS *Ranger* with Carrier Air Wing Fourteen returned to NAS ALAMEDA after an eight-month deployment to the combat area of Southeast Asia.

31—The A-4F, newest of the *Skyhawk* attack bombers, made its first flight at Palmdale Airport with Douglas test pilot Walter S. Smith at the controls.

SEPTEMBER

8—An A-3A *Skywarrior* equipped with a *Phoenix* missile and missile control system, located, locked on at long range and launched the missile to intercept a jet target drone over the Pacific Missile Range near San Nicolas Island. Although the *Phoenix* had been launched successfully before, this was the first test employing all functions of the control system.

15—The USS *Guam* (LPH-9) recovered the *Gemini XI* spacecraft, with astronauts Charles Conrad and Richard Gordon on board, at sea 700 miles off Cape Kennedy. The recovery marked the end of a three-day mission in space in which the astronauts made several dockings with an *Agena* satellite, a walk in space and an altitude record of over 850 miles.

16—Helicopters from USS *Oriskany* rescued 44 men from the British merchant ship *August Moon* as she was breaking up in heavy seas on Pratas Reef.

17—The first CH-53A helicopters delivered for service arrived at MCAF SANTA ANA for assignment to HMH-463, after being flown cross-country by Marine pilots from the Sikorsky plant in Connecticut.

19—The Secretary of the Navy approved award of the Navy Unit Commendation to USS *Ranger* and Carrier Air Wing 14 for exceptionally meritorious service during combat operations in Southeast Asia.

In the last quarter, pressure for peace in Vietnam gathered momentum as new pleas were made and new offers proposed, but nothing appeared to have been gained. The President left the country to attend a summit conference in Manila and made it a seventeen-day, seven-nation tour. Red China announced successful launching of a nuclear warhead missile. New pictures of the moon came back from space in startling detail. Housewives started nationwide picketing of food stores in protest against rising prices. Both parties claimed gains in national elections. Tension rose in the Middle East. UN nations agreed on terms of a treaty that will assure the use of space for peace to the benefit of all mankind.

OCTOBER

1—The 12th annual *Deep Freeze* operation began as RAdm. F. E. Bakutis, Commander U. S. Naval Support Forces, Antarctica, landed on the Ross Ice Shelf aboard a ski-equipped C-130 *Hercules* piloted by Cdr. Daniel Balish, commanding VX-6.

7—Cdr. Robert E. Hunter, Jr., commanding officer of Fleet Tactical Support Squadron 30 (VR-30), based at NAS ALAMEDA, accepted the first two C-2A *Greyhounds*, a turboprop carrier-on-board delivery aircraft, delivered to an operational squadron.

10—The Chief of Naval Operations presented his "Readiness Through Safety" trophy to Commander Naval Air Force, Atlantic Fleet, winner of the 1966 competition. The Atlantic Air Command, judged safest among the seven major Navy and Marine commands eligible for the award, flew 43,500 more flight hours than in the previous year yet reduced its accident rate by 22 percent.

14—The Chief of Naval Operations cited Patrol Squadron 17 of the Pacific Fleet and Patrol Squadron 49 of the Atlantic Fleet for outstanding performance

in aircraft maintenance and announced them winners of the Aircraft Maintenance Award. The competition, open to both land and seaplane squadrons, was conducted for the first time this year.

14—The A-7A *Corsair II* light attack bomber was formally accepted for service and assignment to VA-174 of Readiness Attack Carrier Air Wing Four, by VAdm. C. T. Booth, ComNavAirLant, in ceremonies at NAS Cecil Field, Jacksonville, Fla.

19—The first flight of *Deep Freeze 67* to the South Pole station broke the record for early fly-ins set in 1965 by four days. After a three-hour, 730-mile flight from McMurdo Station, the aircraft stayed only long enough to unload a cargo of fresh provisions and over 400 pounds of mail—the first at the Pole in eight months—and to take on board men of the wintering-over party for whom reliefs had been flown in.

26—USS *Saratoga*, with CVW-3 on board, returned from duty with the Sixth Fleet in the Mediterranean.

26—Fire broke out on the hangar deck of USS *Oriskany* operating at sea off Vietnam, resulting in the loss of 44 officers and men. Only heroic effort by the crew against great odds prevented greater loss of life and more serious damage to the ship.

31—The Commandant's Aviation Efficiency Trophy, presented each year in recognition of outstanding accomplishment of all assigned tasks, was awarded to Marine All-Weather Fighter Squadron 212. The outstanding record of the squadron was made in a year which began with a five-month deployment to combat on board a Seventh Fleet carrier and was completed without accident or incident except those resulting from enemy action.

In October, VR-30 and VRC-50 were commissioned; Guided Missile Units 7 and 55 were decommissioned.

NOVEMBER

1—VAdm. Allen M. Shinn reported for duty as Commander Naval Air Force, Pacific Fleet.

1—VAdm. Thomas F. Connolly assumed duty as DCNO (Air), relieving RAdm. W. I. Martin who had been acting in that capacity since VAdm. Paul H. Ramsey's retirement on the first of October.

3—LCol. Charles H. Ludden, first Marine ever to command a carrier air wing in combat, was named Marine Aviator of the Year and winner of the Alfred A. Cunningham Trophy.

15—USS *Wasp* made the last recovery of the *Gemini* program picking up astronauts James Lovell and Edwin Aldrin and their spacecraft 600 miles southeast of Cape Kennedy.

16—USS *Oriskany*, with Air Wing 16, returned to San Diego from duty with Seventh Fleet before proceeding to Hunter's Point for repairs to damage sustained in fire, 26 October.

21—The seaplane tender *Salisbury Sound* returned to Whidbey Island from duty with Seventh Fleet in support of patrol plane operations in Southeast Asia.

23—USS *Intrepid* (CVS-11) returned to Norfolk after a seven-month deployment as an attack carrier in support of U.S. effort in Vietnam. In 100 days, planes of her all-attack Carrier Air Wing Ten flew 7,500 sorties, dropped 9,000 tons of ordnance and logged over 12,000 hours of combat flight.

During November, HMMT-302 was activated; Carrier Air Wing 17 staff was established.

DECEMBER

2—USS *Constellation*, with Air Wing Fifteen, returned to San Diego after duty with Seventh Fleet. In six month of operations, Carrier Air Wing pilots flew more than 9,000 combat sorties and dropped nearly 11,000 tons of ordnance on enemy targets in North and South Vietnam.

8—Two *Neptunes* of Patrol Squadron Twenty-Three flew search missions assisting ships in locating widely scattered survivors of the Greek ferry boat *Heraklion* which sank in the Aegean Sea with 200 passengers on board.

10—In ceremonies at NAS Alameda, USS *Hancock* (CVA-19) was awarded the Navy Unit Commendation for outstanding service during her last deployment to the Western Pacific, Nov. 1965 to July 1966.

15—Admiral John H. Towers, Naval Aviator No. 3, was posthumously honored by enshrinement in the National Aviation Hall of Fame at Dayton, Ohio.

FIRST FLIGHT *of the A-4F: Latest of the Skyhawks, the new jet has a more powerful engine, steerable nose gear, and other improvements.*

C-2A GREYHOUND *on board Kitty Hawk in the South China Sea making her first carrier-on-board-delivery in combat zone, 9 Dec.*

BOMBS BIG BUSINESS' IN TONKIN GULF

Story and Photographs by JO2 Tony Boom

BOMBS CROWD CONSTELLATION'S HANGAR DECK DURING AN AMMO UNREP

UNTIL RECENTLY, when their ship returned home from an extended deployment to the waters off Vietnam, crewmen of the attack carrier *Constellation* had quite a business going for themselves.

The business was in bombs—and *Constellation* men enjoyed a big turnover of their product. One of them, AO3 Ed Kluver, should know about that. He kept the "books" for the business, and he figured that more than 10,000 tons of ordnance were transferred to *Connie* from ammunition ships during a period that started when the carrier joined the Seventh Fleet until shortly before she left the Western Pacific.

Keeping tabs on the business' "turnover," and making certain the product was delivered to the right place—*Connie* aircraft bound on strike missions over Vietnam—called for a skilled organization. *Connie's* is among the best.

Bomb pushers, assembly men, storage directors, elevator operators and safety men kept the bombs flowing smoothly from the time they came aboard the CVA until they left again, under the wings of ship's airplanes.

The job of properly and adequately maintaining the product that kept *Connie's* business booming started when an ammunition ship pulled alongside the big carrier about every third day while the CVA was on the line.

During ammo unreps, ordnancemen assigned to the ship's "G" Division struck below the bombs and ordnance as they piled up on the hangar deck. Bomb pushers, assisted by men from other divisions assigned to ordnance-handling details, used fork lifts, 21 bomb elevators, pushcarts and plenty of muscle to store weapons in 150 magazines located throughout the big carrier's interior.

Keeping track of all the ordnance was the job of AOC Thomas Riggs, who split a 24-hour workday in Ordnance Control with AO2 Charles D. Swann.

When the ship's "Strike Center" called down an order or sent a load plan to Ordnance Control, designating types of bombs for each air-

GRACE, AN, KEEPS TRACK OF BOMBS

ORDNANCEMAN CHECKS STOCKPILE

A BREAK MEANS A CHANCE TO READ

ORDNANCE COMES TO CONNIE FROM AMMO SHIP MT. BAKER; BOMBS ARRIVE ON FLIGHT DECK FOR INSTALLATION

craft, Riggs and company had to see that what was needed was provided immediately. They did so by passing the requirements to ordnance shops all through the ship, and the teamwork was so efficient a *Connie* launch was never held up because of ordnance-handling delays.

When bombs were brought up from the magazines, they passed through one of two bomb-assembly areas before they were taken to the flight deck. In these areas, crews working 12-hour shifts added fins and mounting lugs to the weapons.

Next stop was the "roof," where waiting squadron ordnancemen pushed the bombs to planes for mounting, fusing and arming. Then squadron pilots completed delivery to designated military targets in Vietnam—and reports have it that the recipients got quite a bang out of such speedy service.

Although almost every day on the line was a busy one for *Constellation's* ordnance personnel, the day their planes dropped 238 tons of bombs on enemy targets was their most hectic. They unanimously pick the ship's new A-6A *Intruder* as the plane that gives them the most work.

Connie's return to the States meant a temporary slump in the business—but those in the know figure it's only a matter of time before things pick up again.

A BOMB-LADEN A-6A INTRUDER IS LAUNCHED FROM USS CONSTELLATION FOR STRIKE AGAINST VIETNAM TARGETS

EXTENSIVE BIS TRIALS FOR THE A-7A

FROM FAR points of the country, Naval Aviation experts convened at the Naval Air Test Center, Patuxent River, Md., in mid-December to consider the progress on the Navy's latest attack aircraft, the A-7A *Corsair II*.

While these men prepared for their session, the aircraft itself, in a laboratory designed to simulate climatic conditions, sweated it out in a tropical rainstorm at Point Mugu, Calif., at a temperature of 160° F. Later, it was deluged with rain at the rate of one inch per hour.

The heat, the rain, to be followed by arctic cold and snow, were all part of the Navy's Board of Inspection and Survey (BIS) service acceptance trials for the aircraft.

The BIS trials on the *Corsair II* are being conducted concurrently by three Navy units.

Tests at NATC PATUXENT RIVER are concerned with the A-7A's flying qualities and performance; its suitability for use by service personnel under accelerated service conditions; its ability to operate on carriers and advanced airfields; and the efficiency of its avionics and conventional weapons systems.

At the Naval Weapons Evaluation Facility, Albuquerque, the *Corsair II* is being tested for compatibility with nuclear weapons.

The trials at the Naval Missile Center at Point Mugu will determine the aircraft's ability to operate with Navy missile systems.

When the BIS officials met at Patuxent River in December, Captain R. E. Rader headed the group which included Captain C. O. Holmquist, Commander of the Naval Missile Center, and Maj. Robert E. Solliday, leader of the Center's A-7A BIS trials team.

The senior member of the BIS team at Patuxent River temporarily suspended the BIS trials to await installation of a modified turbofan power plant in the test aircraft. This will delay the guided missile BIS trials beyond the usual 90-day period. Tests which do not require the modified engine will continue as scheduled at Point Mugu, according to Captain Holmquist.

AIRCREWMEN READY THE A-7A FOR RAIN TEST IN ENVIRONMENTAL LAB

Actually, reports Maj. Solliday, the guided missile trials were originally planned for a later date. The Vietnam situation accelerated the program and the guided missile work commenced at Point Mugu. Even now with the trials well under way, most of the repair parts and support equipment for the A-7A are located at NAS LEMOORE.

To conduct the missile trials, a team of officer and civilian experts has been established. The members, 19 in all, have been drawn from several departments at the Naval Missile Center. Not all members of the team spend full time on the A-7A, but all are available for the high priority BIS trials.

Forming the nucleus of this team are Maj. Solliday, Lt. Paul A. Polski, David F. Brumley and Gordon D. Thompson. The aircraft maintenance team is headed by Chief Jack L. Shockley.

The work on the A-7A BIS trials has involved practically every department at Point Mugu as the project calls for assistance in solving its problem within the time span allotted.

"Because of the deadline, we've had to educate people on response time," reports Maj. Solliday. "On occasion, they just didn't believe we were in a hurry."

The BIS team must come up with answers to thousands of questions about the aircraft. They can be boiled down into four main groups.

1. Is the design of the A-7A adequate for operation with Navy guided missiles and are the missile systems and aircraft systems compatible?

2. Can the aircraft's missile systems be maintained and employed by Navy crews under anticipated operational conditions?

3. Can the A-7A with its missiles perform the mission it was designed to do?

4. What are the effects of countermeasures on the missile systems and are its counter-countermeasures suitable?

THE TROPICAL rainstorm whipped up for the A-7A in the Missile Center's Environmental Lab was expected to answer parts of question #2. Will the system work after it's been drenched or will some of the wires short, or contacts corrode? If weapon system troubles develop during a laboratory test, even worse can be ex-

pected on the deck of a carrier in the China Sea or Arctic Circle.

The *Corsair's* ordeal in the Environmental Lab began December 9. The plane was towed into the weather chamber and then the heat was turned up to 160° F.

Sunday, after nearly two days of baking, the deluge came: four hours with water pouring at the rate of an inch an hour. Then an electronics crew checked the *Corsair's* missile systems, noting discrepancies.

But there was more to come. The water was turned on again, this time at a slower rate—half an inch each hour. The temperature was adjusted at 95° F., humidity 100 percent. This time the ordeal was shared by a crew of men from the Center's Weapons Handling Division. These men loaded and unloaded missile and countermeasure pods on the aircraft to see if both men and aircraft systems were compatible under these conditions.

Then they did it again—in the dark with only dim red lights to assist.

The next weekend the A-7A went back into the climate chamber where it was subjected to arctic conditions. Then the checkout of the missile systems was repeated.

When members of Chief Shockley's maintenance crew aren't actually working on the plane, they are reading the service manuals. One of the BIS tasks is checking the manuals to be sure they are understandable and accurate.

The BIS team is still looking at the *Corsair*, according to Lt. Polski, who has orders to an A-7A squadron. The team is recommending ways to improve the aircraft before it is deployed for combat.

Backing up the Naval Missile Center BIS team are the men from Ling-Temco-Vought, manufacturer of the A-7A. Under LTV's representative, James A. Mincher, two engineers and seven maintenance experts stand by to lend assistance whenever needed.

Near the end of December the *Corsair* went into the last phases of its missile captive flights and then came missile firings. Maj. Solliday and Lt. Polski continued to fly most of these operations but, before the trials were over, other Point Mugu pilots had a turn in the cockpit. "We wanted to discover as many problems and get as many expert opinions as possible," Maj. Solliday says.

Every discrepancy uncovered during the trials is reported within 72 hours to the Board of Inspection and Survey. Each report includes a recommendation for correcting the problem which represents an improvement in the airplane.

OTHER BIS trials will relate to maintainability. The requirement to verify a contractual maintainability guarantee is another of the many "first-time" efforts in the A-7A program. The maintainability trials in an operational environment of a Fleet squadron are scheduled for this spring and summer.

All maintenance will be performed by Navy personnel and, except for actual carrier operations, the aircraft will be flown through its entire operational envelope. All maintenance actions on the selected group of test aircraft, on items of equipment removed for maintenance at the intermediate level of maintenance, and on contractor-furnished special support equipment will be observed, timed and analyzed by the joint Navy-Contractor Test Monitor Board under the direction of the Commander, NATC PATUXENT RIVER.

The A-7A contract includes a maintainability guarantee with graduated penalties provided in the event the total weapon system is not maintainable within the guarantee parameters. This new concept in aircraft procurement procedures generated the requirement for in-service verification of the guarantee.

IN THE middle of November, the A-7A completed its first carrier operations from the decks of the Navy's newest aircraft carrier, the *America*, off the Virginia capes. During the week-long trials conducted by the Navy Board of Inspection and Survey, the A-7A made 75 catapult shots, 73 arrested landings and 89 touch-and-go landings aboard *America's* angled deck.

Pilots of the planes were Commander Don Lynam, LCdr. Fred Hueber and Lt. R. L. Coffman, all from the carrier suitability branch of the Flight Test Division at NATC PATUXENT RIVER.

In January, Navy assigned to Ling-Temco-Vought a $36.5 million contract covering additional funding for the A-7B. The new contract is a modification of a previously announced award for the A-7B and brings to $340,700,000 funds allocated for Navy versions of the A-7 since March 1964. The company also has received an initial contract of $19,147,000 for an Air Force version of the *Corsair II*, announced last October.

The A-7B is equipped with a more powerful turbofan-jet engine (P&W TF-30-P8) than is used in the A-7A, now in production at Dallas.

AN A-7A DURING BIS TRIALS ABOARD USS AMERICA OFF VIRGINIA CAPES

THE FIRST TWO *UH-46D Sea Knight helicopters for the U.S. Navy lift off from the Boeing Company's Flight Center, Philadelphia, en route to HC-1 at Ream Field, Calif. Two UH-46's, using the Navy's vertical replenishment technique, can transfer up to 100 tons of cargo per hour between ships. The UH-46D is powered by GE-T58-10 engines and features a new control system which results in greatly improved pilot visibility over the instrument console.*

Hover Capability is Tested

CH-53A Flown at High Altitudes

Several weeks ago, a team composed of six members of the Flight Test Division at NATC PATUXENT RIVER and seven representatives of Sikorsky Aircraft flew a CH-53A helicopter to Bishop, Calif., for high elevation tests.

Primary purpose of the tests was to evaluate the hover performance of the CH-53A in mountain and upland areas. Single engine landing and hover tests in and out of ground effect with payloads of up to 8,000 pounds were conducted. The evaluation, performed at altitudes from 4,500 feet to 11,200 feet, confirmed the helo's high altitude hover capability and provided information to be included in operating handbooks.

VMO-5 is Flying High Again

'Black Aces' Open at Pendleton

After a deactivation of nearly 22 years, Marine Observation Squadron Five again takes to the air.

Nicknamed the *Black Aces,* the Third Marine Aircraft Wing unit was reactivated the middle of December at Marine Corps Auxiliary Landing Field at Camp Pendleton.

VMO-5 was originally organized at Quantico, Va., February 14, 1944, as part of the Fifth Marine Division. VMO-5 will again support that same division.

During WW II, VMO-5 won the Navy Unit Commendation and the Presidential Unit Citation in the Iwo Jima campaign. After only 25 months of operations, the *Black Aces* were disbanded in Sasebo, Japan.

Heading VMO-5 is Lieutenant Colonel D. K. Tooker, a specialist in the UH-1E which the squadron flies. The outfit's present strength is 18 pilots, 190 ground personnel.

Accident-Free Hours Logged

For Cougar-Flying VF-126 Pilots

At NAS MIRAMAR, VF-126, flying the F-9 *Cougar,* passed the 55,000-accident-free-hours mark late in November. Its last accident occurred January 18, 1961.

VF-126, commanded by Commander R. E. McJunkin, trains and qualifies Fleet replacement pilots in instrument navigation for F-4, F-8 and A-3 aircraft. Selected Fleet pilots are also furnished a jet refresher course in the TF-9J.

Twenty-one instructor pilots, three ground officers and 215 enlisted men produce about 500 pilot graduates for the Fleet each year. The instructor pilots, each with an average of over 1,800 jet hours, have all had previous Fleet jet experience in a variety of jet aircraft.

VF-126 is one of seven squadrons under the control of RCVW-12.

THE U.S. NAVAL *Test Pilot School at NATC Patuxent River recently conducted a limited evaluation (nine flights) of the Lear Jet Model 24. NATC representatives also participated. Empty weight of the aircraft is 7,200 pounds and maximum takeoff weight is 13,000 pounds. It has a high-speed cruising capability of approximately Mach .8 and lands at between 115 and 125 knots. In ten minutes from brake release, it climbs to 40,000 feet.*

THE NAVY *is procuring nine TC-4C "flying classrooms." In each one as many as six students, training as A-6A Bombardier/Navigators (B/N's), can be simultaneously instructed in the operation of the complicated A-6A avionic system. This trainer version of the Grumman Gulfstream I will free more A-6A aircraft for combat. The*

TC-4C is fitted with an A-6A radome nose which houses the search and track radar antennas. The aft cabin contains an independent avionics system consisting of an A-6A training cockpit which accommodates a student pilot and student B/N, an instructor's seat and four radar/computer read-out consoles linked to cockpit displays.

Record Claimed for Vietnam

Navy Pilot Amasses 200 Missions

Lieutenant Al Hyde, VA-155, has flown 200 combat missions in the Vietnam conflict.

He made a combat cruise with CVW-15 in USS *Coral Sea* in 1965. Now on his second combat cruise, he completed his 200th mission on September 20 when he flew his A-4 *Skyhawk* aboard a Seventh Fleet attack carrier after a raid over North Vietnam.

Only 35 of the 200 missions have been over South Vietnam. In 1965, Lt. Hyde was hit seven times; in 1966, only once.

"I can find my way around North Vietnam prety well now," Hyde jokes. "I haven't used a road map yet on this cruise."

For his part in the Vietnam conflict, Lt. Hyde has received 17 Air Medals, three Navy Commendations and has been recommended for the Distinguished Flying Cross.

New Helos for HMH-461

Marines Welcome Sea Stallions

Two CH-53A *Sea Stallions,* the Navy's largest, fastest production helicopters, arrived at MCAS NEW RIVER, Jacksonville, N.C., the latter part of December.

The welcome aboard to Marine Aircraft Group 26 was headed by Major General Norman J. Anderson, CG, 2nd Marine Aircraft Wing.

MGen. Anderson hailed the arrival of the new Sikorsky helicopters as a "milestone in Marine Corps history" and turned over the flight log books to Colonel T. T. Tulipane, C.O. of MAG-26.

The CH-53A's, the first assigned to an East Coast Marine Corps unit, are to be flown by Heavy Helicopter Squadron 461, commanded by Maj. C. H. Northfield.

The *Sea Stallion's* standard seating arrangements provide for 38 combat-equipped Marines and cockpit seats for a three-man crew. With seats stowed, the CH-53A can accommodate a combination load of troops, litter patients and cargo.

The helo loads or unloads more than a ton of palletized cargo a minute. One man using power equipment can load or unload the cargo. The helo's 8½-foot-wide ramp is hydraulically operated.

NAVY *Lt. Terry B. Appelgate (left), a VT-23 flight instructor, uses a radio navigational training device to brief NavCad J. H. Algermissen. VT-23 instructors designed the device to demonstrate the process which takes place when the student pilot is controlling his plane in flight by instrument procedures.*

Zips through Pilot Training

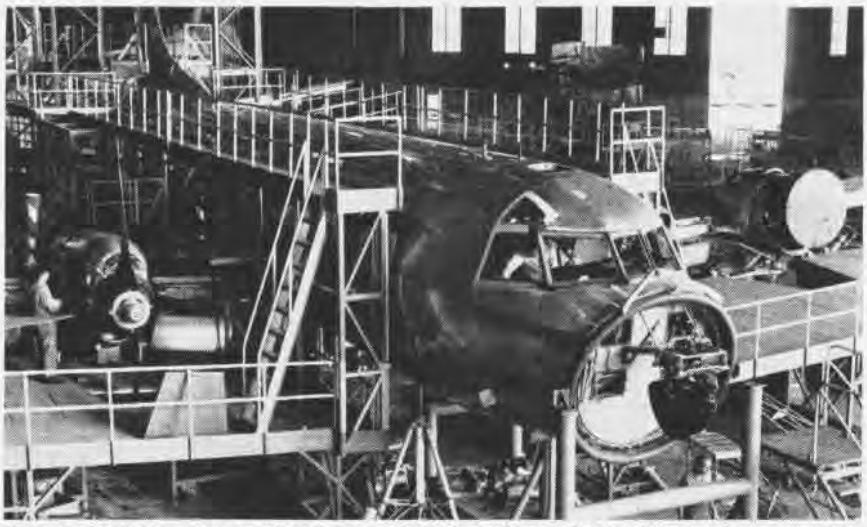
Wins Navy Wings in 11 Months

A former Naval Academy football player recently won his Naval Aviator's wings at NAS CORPUS CHRISTI in just 11 months, something of a record for a course which usually requires 18 to 20 months.

The man who zipped through the course and completed his training in the twin-engine Grumman *Tracker* with VT-27 is Ltjg. Lawrence M. Kocisko. He played guard on the 1962 Navy team which was ranked number two in the nation that season. As guard, he helped protect Navy's All-American quarterback, Roger Staubach.

Kocisko said he was able to shorten his training by "pushing myself and asking others to push me." He skipped a two-week course by taking the final exam the first day and making a near-perfect score. After that he had no trouble in accelerating his training.

Kocisko is now assigned to VP-16, Jacksonville, Fla., and expects to fly the Lockheed P-3 *Orion.*



THE P-3 DOCK AS IT LOOKED ON FIRST DAY OF OPERATION AT ALAMEDA

ALAMEDA'S NEW P-3 WORK DOCKS

THE OVERHAUL and Repair Department at NAS ALAMEDA now has two sets of work docks to facilitate rework of the P-3 *Orion*.

After three years of design, funding and construction at a cost of $240,000, these docks are expected to save manpower, provide safe access for workmen and improve the quality of rework.

The stands are equipped with pre-positioned electrical and air outlets, so it will no longer be necessary for a mechanic to string extension cords for distances up to 100 feet. The stands have eliminated much of the repositioning of the small work stands and have removed the jungle of electrical and air lines from the deck. Light fixtures are mounted under the stands to illuminate areas under the plane.

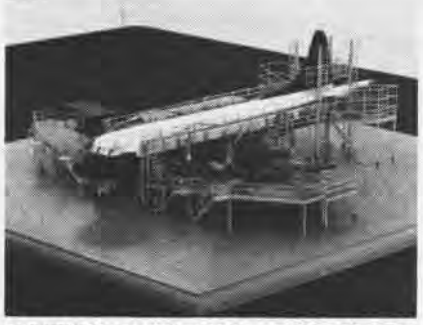
The idea of providing work docks for the P-3 gained favor originally because the size of the airplane lent itself to this particular type of arrangement.

Trips were made to other work docks on the West Coast, such as those used by Western Airlines, Braniff and United Airlines. After full discussion by O&R personnel chiefly concerned with the project, rough plans were drawn up. Models were made and studied. With photographs of the models and figures to justify the cost, a request for approval was sent to BuWeps.

Since low bids exceeded the budget allowance, O&R decided to do as much of the work as possible and a contract was let to provide erection drawings, cut steel and fabrication of stairways and handrails.

The first steel was received last May. The fuselage stands were constructed by the appropriate O&R shop. O&R workmen then installed the electrical and mechanical equipment. Painting of the docks was done only during slack times in the paint shop in order to keep labor costs down.

The two work docks were completed in November 1966. Once the man-hour savings audit is complete, Alameda will seek approval for the construction of three more docks. With five work docks in use, the expected savings will be in the realm of $325,000 per year.



PATTERN SHOP BUILT THIS MODEL

A New Photo Lab Opens

Located at Roosevelt Roads

Fleet Air Caribbean's new $220,000 Photo Lab has opened. It houses over $100,000 worth of modern photographic equipment.

The entire facility is air-conditioned. Each room has individual temperature and humidity controls to insure absolute stability of climatic conditions necessary for the storage of photo-sensitive materials.

New equipment includes a 70mm automatic processing machine, a black and white motion picture printer, automatic color negative processing machines and color print processor, as well as a walk-in refrigerator to store film and photographic paper.

The building is specifically designed to meet the requirements of a photographic laboratory. Specially designed light traps are installed as permanent fixtures in the walls between the darkrooms and the lighted working areas.

ASO Savings for Fiscal '66

Value Engineering Exceeds Goal

Under the DoD Value Engineering (VE) Program, the Navy Aviation Supply Office, Philadelphia, saved $6.7 million during fiscal 1966, far exceeding its goal of $5 million.

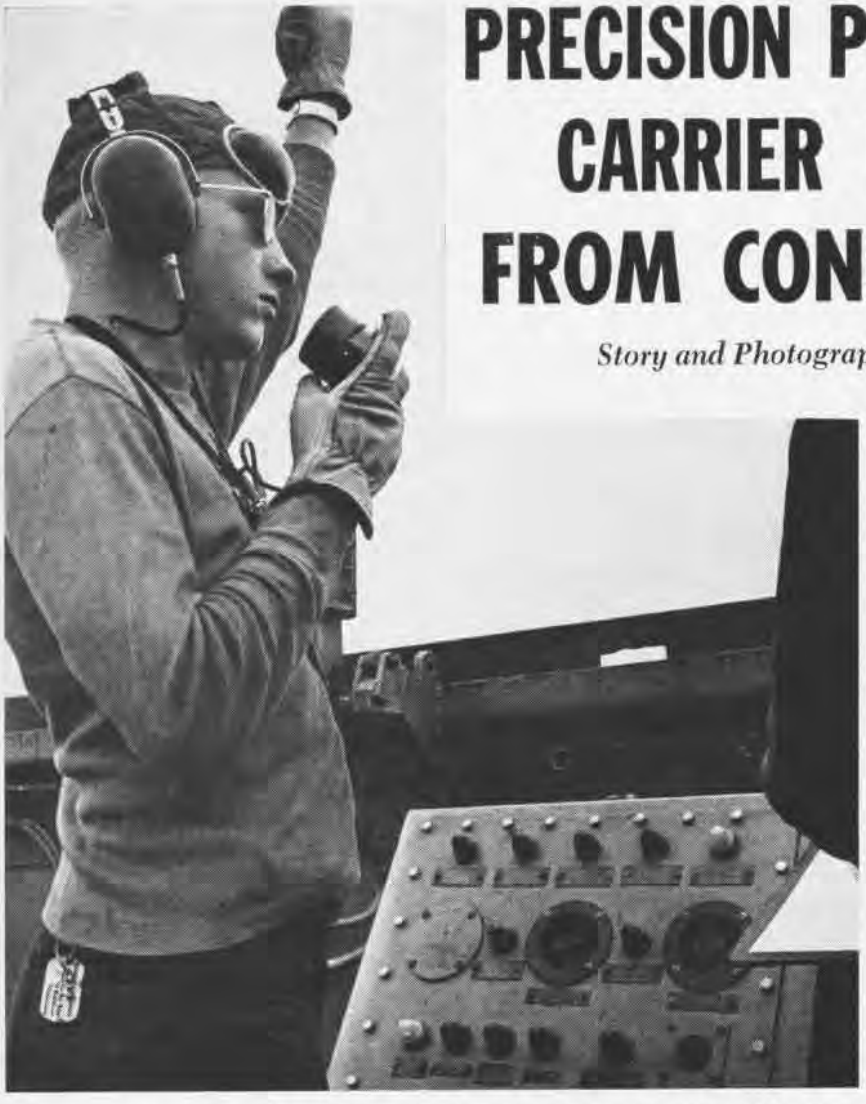
In the program, articles to be procured for the Navy are studied with an eye to eliminating or modifying any feature which contributes to the cost but is not necessary to performance, maintenance, reliability, standardization or interchangeability.

The largest single VE saving during the fiscal year was $3,786,542. This was accomplished by eliminating shelf life requirements and changing maintenance procedure relative to inflatable life rafts. VE studies showed that material used today for life rafts does not deteriorate with age and mandatory disposal based on age alone is no longer necessary.

VE saving at ASO has totaled over $11.8 million since the program began. In many cases, the saving resulting from a VE program during one fiscal year continues during additional years.

PRECISION PERFORMANCE: CARRIER LAUNCHES FROM CONSTELLATION

Story and Photograph by JO2 Tony Boom



IN A PRECISION performance of both men and machines, Navy combat pilots are launched hourly from the flight decks of Seventh Fleet attack aircraft carriers. A report from USS *Constellation* shows hard-working crewmen manning her powerful, steam-driven catapults.

The ship is equipped with four "cats" and the ride offered by each of them is a relatively short one. But in the space of just 250 feet, both aircraft and pilot go from a standing start to a speed that can reach 200 mph, enough of a "push" to guarantee the plane will stay airborne for the mission that has been assigned.

Every time a plane becomes airborne, it represents the culmination of a launch sequence that can be repeated more than 150 times during a normal 12-hour launch cycle each day as *Constellation* operates.

Visually, the launch sequence presents quite a show. Some have called flight deck action, especially during aircraft launches, "organized mayhem"—and they may be right. (See the next two pages for a pictorial display of *Connie's* aircraft being launched on combat missions.)

But behind the high-speed kaleidoscope of action is a well-disciplined team trained to launch the planes with speed and safety.

Each pair of *Connie's* catapults —one on the axial deck and one on the angled deck—is controlled by a Catapult Officer. Working from a control panel between the two catapults, he dials the steam pressure needed to launch a particular aircraft.

The man who actually pushes the button that starts the launch is the Deck Edge Catapult Operator. He mans a control console in the catwalk (see photo).

As launch time nears, planes are positioned in preparation. A pilot taxies his aircraft onto the catapult. A bridle is attached to both the aircraft and to a shuttle that rides along the cat track. Connected to a piston inside the catapult system, the shuttle is driven down the track—pulling the bridle and, in turn, the aircraft with it. Like a projectile from a slingshot, the plane will be thrown into the air at the end of the shuttle's run.

A tension bar, which is a six-inch piece of metal with a known breaking point, keeps the aircraft in place while the pilot turns up his engine and the bridle is tensioned. A safety man, the last person out from under the roaring jet, makes a last-second check.

The pilot acknowledges the Catapult Officer's signal with a salute; he's ready for the launch.

The Catapult Officer drops to one knee and points forward; the Deck Edge Operator, who has held his hands over his head to prevent a premature firing, drops his arms and presses the button that sets the cat in motion.

The hold-back snaps. With a roar, the aircraft plummets down the deck. Then it's airborne and away on its mission.

As the plane shoots off the bow and dips slightly before climbing, the "bowman" runs out to check the shuttle and bridles.

Then the sequence continues.

WHERE THE
MISSIONS START

Photograph

Getting several tons of Nav
launch speed of up to 2
of catapult crew members ab
Constellation. Connie's 'cat'
Station just off Vietnam, hand
during the carrier's daily 12-
of that you can be certain. T
a Cadillac thousands of feet
charge of them fail to do the j

LT. R. D. PFEIFER CHECKS CAT TRACK ABOARD CONNIE BEFORE A LAUNCH

BRIDLE IS ATTACHED TO A-4 AS THE PLANE IS POSITIONED OVER CATAPULT

AS E-2A'S PROPS WHIRL BEFO

ACTION BEGINS ON CONNIE'S 'CATS'

by JO2 Tony Boom

et airplane from a standing start to a mph—that's the touchy assignment d such attack aircraft carriers as USS vmen, working in the heat of Yankee the task at hand as many as 150 times r launch cycle. It's a vital mission, e 'cats' have enough power to throw ight up in the air, but if the men in vell, both pilot and plane may be lost.

IM, CAT OFFICER SIGNALS THE PILOT

THE AIRCRAFT'S WEIGHT IS INDICATED ON BOARD HELD BY DAVID A. RAMSEY

AN RA-5C VIGILANTE IS LAUNCHED FROM CONNIE'S FORWARD PORT CAT

NEW SURVIVAL SYSTEM FOR HELICOPTERS

By F. Terry Thomasson
Naval Air Systems Command Headquarters

You've just been airlifted from the States to the war zone and are being ferried with others out to the ship as replacements. You look down on the jungle which completely hides snipers. You'll be glad to get past the coast line.

As the helicopter nears the coast, you hear ground fire. Several projectiles rip through the helicopter. There's a fire aft. Almost immediately the helicopter begins to gyrate violently. You think, angrily, "I haven't even had a chance to get a crack at them and they've got me already!" You visualize a horrendous, fiery crash. Is it possible to survive?

Before finishing this thought you're aware of several more explosions. The helicopter is jerked about firmly. Everything is now quiet.

You look down to see the water slowly coming up at you. The guy next to you nudges you and, pointing upward, says, "Parachutes!" Seeing inflated parachutes above, you recall having heard about something called a "helicopter capsule" which will save helicopter occupants during inflight emergencies like this one. You are thankful to be aboard a helicopter which already has one installed.

As the helicopter hits the water, you think, "What must I do to survive?" Large flotation bags begin to inflate automatically about the capsule. Your question is answered, "Do nothing! Just sit and wait."

The pilot comes aft, smiling. He assures everyone that a ship has heard the automatic distress signals and is on its way to pick you up. The rotor blades had been hit; a fire started in one of the fuel tanks. Since autorotation was impossible with the badly damaged rotor, the pilot had immediately pulled the "handle" to actuate the "helicopter personnel escape and survival system." This automatically suppressed the fire and deployed the parachutes.

THIS SCENE is fictitious but not impossible. It can become a reality in the near future, since the feasibility of a fuselage capsular escape system for helicopters has been proved.

AT NAF *El Centro, Calif., the helicopter personnel escape and survival system is tested. Above, flames are from the charge separating the forward fuselage from the rear (unoccupied) section. Next, the rotor blades are off and the parachutes are deployed. In the final shot, the parachutes are fast filling with air, thus recovering and saving the fuselage by arresting its fall.*

To develop a method of saving helicopter occupants during inflight emergencies, BUWEPS (now Naval Air Systems Command Headquarters) let a contract in 1961 to the Vertol Division of Boeing Company. Vertol studied naval helicopter accidents to find out why the occupants received fatal or critical injuries and to determine what steps needed to be taken to prevent such injuries. Vertol decided that some means of inflight escape was required. After comparing conventional bail-out, ejection seats and a capsular escape system, Vertol found the latter the better method.

Helicopters are multi-crew and/or passenger carrying vehicles which quickly become unstable during serious inflight emergency situations. Getting a large number of people "out the door" takes time, so a bail-out method would be unsatisfactory for escape at low altitudes. Furthermore, the helicopter's instability complicates exit and endangers the occupants after bail-out. Ejection seats involve an unacceptable weight and space penalty which would lower the helicopter's effectiveness. In addition, the vehicle's rotor blades would severely complicate an ejection seat method.

Thus, the capsular escape system became the obvious choice. It was determined that the capsule had to work at a minimum altitude of 100 feet in hovering flight. With this minimum, it was found that 56% of actual fatalities could have been prevented had a capsular escape system been in use. The study also concluded that an additional 25% of fatally injured persons could have been saved by other means, such as fire and impact protection and emergency flotation.

On the basis of this study, BUWEPS in 1963 set up a program which would prove the feasibility of the helicopter fuselage capsule escape system. Vertol was to be the program manager. To the Naval Weapons Laboratory at Dahlgren, Va., because of its know-how in the

area of explosive actuating devices, was assigned the responsibility for developing the initiation, rotor blade jettison, fuselage severance and propulsion subsystems. The responsibility for the recovery subsystem (parachutes) was given to the Stencel Aero Engineering Corporation, Asheville, N. C.

Stencel's breakthrough in the development of ultra-fast-opening parachutes through the use of explosive devices to deploy and spread parachutes made the 100-foot minimum altitude capability possible. A booster rocket, such as that used in ejection seats, could not be relied upon to provide additional altitude because of the helicopter's instability in serious emergency situations—because of this instability, it might, in fact, thrust the capsule toward the ground. The ultra-fast-opening parachutes, on the other hand, made it possible to "catch" the capsule prior to ground impact.

Inflight actuations of the system installed in drone helicopters would prove conclusively the feasibility of the system. For the test, obsolete H-25 (HUP) helicopters were used. The Aviation Safety Engineering Research Division of the Flight Safety Foundation was given the difficult task of devising a remote control system (drone) for the H-25 and flying the actual flight profiles during the tests.

A drone test at the Naval Aerospace Recovery Facility, El Centro, Calif., on March 31, 1966, concluded the program. The test was a milestone—the first inflight demonstration in which a complete "inhabited" portion of an aircraft fuselage was severed and recovered intact. Two additional tests substantiated the results. The tests have proved the escape capability of the system to be 100 feet in hovering flight, a design objective, and even lower altitudes with forward speed. The system is composed of the following four subsystems: Initiation, Severance, Rocket Separation, and Recovery.

Having proved the feasibility of the capsule, the Naval Air Systems Command has inaugurated a program to make the opening fictitious scene a reality. The capsule is the backbone of the system but other features will be included—shock-absorbing devices (energy-absorbing seats and landing gear to cushion capsule landing and crash impact forces experienced by the occupants), fire prevention and suppression systems to eliminate inflight and post-crash fires, ballistic projectile protection, flotation and sea survival systems and survivor locator devices.

Prime advantage of the system is that the passengers play a passive role. No action, beyond that of clenching their teeth and holding on, is required of them to save their lives. Only a single action by the helicopter pilot, or other crewman if the pilot is incapacitated, initiates a series of completely automatic sequences which will result in the recovery of the occupied fuselage section and survival of the occupants.

Fast Processing at NATC

Computer Tests at High Speed

During May 1966, a new high speed digital computer system was installed at the Naval Air Test Center, Patuxent River, Md. The system, a DDP-224, manufactured by Computer Control Company, is being used to process data gathered in flight testing naval aircraft.

The present carrier suitability demonstration of the F-4J is the first program to utilize this system fully. With the use of the DDP-224, data recorded on magnetic tape during the test flights can be directly processed by the computer without any manual reading.

In the F-4J program, over 150 parameters of information are being recorded continuously during each test flight. By utilizing the DDP-224, scaling, corrections, computations, and establishing formats can be done more accurately and much faster than with previous hand-reduction methods.

VMFA-122 has Record Year

Total of 4,362 Safe Flight Hours

On November 17, 1966, VMFA-122 completed one year of accident-free flying. The MCAS EL TORO squadron flew 4,362 hours in the F-4B during the record year.

Maj. J. E. Hudson is C.O. of the Marine fighter-attack squadron.

Add-On Contract Awarded

Navy Buys 18 More 'Buckeyes'

NASC has awarded North American Aviation an add-on contract of approximately $8.9 million for production of 18 additional T-2B *Buckeyes.*

More than 30 of the trainers are now in use in the Naval Air Training Command.

USS OGDEN, *an amphibious transport dock, made aviation history when, on November 28, 1966, she became the smallest ship thus far to land the XC-142A on her helicopter flight deck. The aircraft, which looks like a flying boxcar, made seven landings as Ogden steamed off Coronado's Silver Strand. The tilt-wing aircraft, the largest U.S. V/STOL ever built, takes off and lands vertically like a helicopter, but flies forward like a conventional transport.*

STRIPPED OF SPARE PARTS, THIS SKYRAIDER 'RESTS' AT LITCHFIELD PARK

NO WHITE ELEPHANTS BURIED HERE

ONE OF THE "facts" of jungle life learned from old *Tarzan* movies was that elephants always knew when they were going to die —and when their names were called up yonder they made their way to vast elephant graveyards that were hidden in the deepest jungle.

Like *Tarzan's* elephants, Navy aircraft have a resting place when they become obsolete; sometimes it's final, and sometimes it's not. It's the Naval Air Facility at Litchfield Park, Arizona, near Phoenix. It's here that obsolete planes are sent for storage—or for reclamation, redistribution and disposal.

The Navy Aviation Supply Office (ASO) in northwest Philadelphia has a good thing going at Litchfield. Like the fortune in ivory hidden in *Tarzan's* elephant graveyards, there's a fortune in spare parts to be had at Litchfield, and ASO stakes its claim there every year.

As it is written in the bloodless language of official directives, what ASO does at Litchfield is called reclamation. On the Navy's flight lines, they use a word that might fit right in with the jungle to describe it; appropriately, they call it cannibalization.

Between 1962 and 1965 ASO sponsored cannibalizing picnics at the facility, at which $100 million in spare parts was devoured. The menu was a la carte and featured such delicacies as dehydrated cartridge hors d'oeuvres at $19.50 each, enjoyed with tasty spring assembly cocktails going for $79 per, and sextant bubble under glass.

Sixteen orders of the latter were polished off at one sitting, at $2,510 an order. An after-dinner delicacy (probably ordered because of its snob value) was a discriminator, at $529 a serving.

Obsolete Navy aircraft are removed from inventory by CNO. NASC then screens them to determine if they are needed by other services or by foreign countries participating in the U.S. Military Assistance Program.

Those left over go to Litchfield Park, where they become available for reclamation or for disposal as scrap. Lists of spare parts they contain are furnished to the Air Force and Army, but first choice goes to the Navy.

For 23 years, Litchfield has spread its feast of spare parts in its reclamation program, but it will soon go out of business: In June 1967 the Davis-Monthan Air Force Base in Arizona will be the sole military aircraft storage and disposition center for DoD—and what a cache *that* will be for spare-part gourmets.

ASO has already started using its spare-part diners card at the new feeding ground. Garcon! A table in the attack aircraft area next to that *Skyraider*, please!

Airborne Computer Tested

NATC Engineer Improves Method

Mr. Charles Farmer, a supervisory electronics engineer at Weapon Systems Test, NATC PATUXENT RIVER, is developing a unique method of testing the inflight performance of an airborne, digital-computer-controlled weapon delivery system.

By using a new, digital data tape recorder, he is for the first time able to record dynamic operations within the computer. Additional signals between the computer and other equipment in the weapon system are simultaneously recorded so as to provide a complete record of weapon system performance.

The test system being developed permits recording tremendous quantities of weapon system performance data in a format suitable for direct application to electronic data processing equipment on the ground. This equipment will automatically edit and code the recorded data so that any portion of the recording may later be machine-selected for analysis.

Mr. Farmer says that in the five or six years since the digital-computer has become the computational center of attack aircraft weapon systems, it has been difficult to assign poor system performance because the computer contribution was unknown.

Now Mr. Farmer expects to isolate the multiple causes of automatic weapon delivery system error, including poor performance of circuits within the airborne digital computer. Once these causes have been determined, corrective action can be recommended.

VT-27's Safety Milestone

At 55,000 Accident-Free Hours

Training Squadron 27 logged accident-free flight hour #55,000 as one of its planes, piloted by Lt. C. B. Wann, landed safely at NAS CORPUS CHRISTI November 23. The squadron's safety record covers 19 months, dating from April 1, 1965. In all, 144,572 landings were involved, of which 3,891 were carrier-arrested. There were 20,884 student instruction flights and 378 were for calendar inspections.

SATS FACILITY BUILT ON EAST COAST

THE FIRST operational SATS (Short Airfield for Tactical Support) training base is now complete at MCAS CHERRY POINT's outlying field, Bogue Field, N. C. It consists of portable, highly mobile and reusable runways. SATS has solved the problem of how to install quickly a jet airstrip under combat conditions. Existing short runways can be made to handle jet aircraft by strengthening the airstrip and using arresting gear.

Bogue Field's airstrip, unsuitable for jet operations because of its short runways, is proving an ideal site for training pilots and support personnel.

This is not the first time Bogue Field has had a SATS facility, for the field was the original home of SATS Site #1. However, the runway matting was disassembled and shipped to Vietnam for installation at the Chu Lai airstrip (NANEWS, September 1965, p. 10) where, since May 1965, planes have been routinely launched and arrested on the SATS runway.

Work began on the Bogue Field training site late in August with Lt. G. L. Jones, SATS officer of MABS-27, Cherry Point, commanding the camp.

More than 250 military personnel took part in the construction. Of these, approximately 120 Marines from MABS-27 installed the SATS catapult and arresting group systems. Fifty men from Camp Lejeune's 8th Engineers, under 1st Lt. J. T. Somerville, controlled the heavy machinery clearing the land adjacent to the runway. Segments of three battalions of SeaBees, the 62nd and 133rd from Gulfport, Miss., and the 71st from Davisville, R. I., performed the actual mat laying. Working two six-hour shifts, they laid 400 feet of matting a day.

Each tough aluminum mat weighs about 144 pounds and measures 2x12 feet. The mat sections are designed to withstand 90,000 pounds of single wheel force at time of impact and 15,000 pounds of tail hook impact per square inch, plus the heat and blast of jet aircraft.

The completed field is rectangular in shape. The 72 by 2,210-foot runway, paralleling the taxi lane, is connected at both ends with parking areas and refueling depots.

At each end of the runway is a CE-1 Mod-3 catapult, powered by two modified J-79 turbo-jet engines which lift the aircraft off the airfield in the allotted 2,000 feet. The catapult system, which weighs 126,250 pounds as a unit, can be broken down for air transport.

Two M-21 arresting gears are installed in the middle of the airstrip.

Pilots training at Bogue learn to adjust themselves and their aircraft to the catapult and M-21 arresting gear. Both the catapult and arresting gear systems used in SATS have evolved from the systems used aboard aircraft carriers.

Pilots are not the only personnel training at Bogue Field. Personnel operating the ground facilities will receive training too. Ground facilities at the site include a Marine Air Traffic Control Unit (MATCU), GCA, crash and rescue, arresting gear, navigational aids and field lighting.

The SATS unit at Bogue Field is the operational training site for STAS personnel on the East Coast. Another SATS site is planned for West Coast training at MCAS EL TORO, California.

SEABEES LAY SATS MATTING AND CATAPULT TRACK AT THE SAME TIME

SELECTED AIR RESERVE

AT CHU LAI AIR BASE, A MARINE SENTRY STANDS GUARD NEAR ONE OF VR-772'S C-118B LIFTMASTERS

RESERVISTS FLY VIETNAM AIRLIFT

By PHC Robert Lawson
Air Wing Staff 77

LAST YEAR, as U.S. military forces in Southeast Asia built up rapidly, logistic support facilities in the Pacific faced a huge task. High priority military air cargo piled up in California awaiting shipment across the Pacific while eastbound military passenger waiting lists in the Philippines, Japan and Hawaii grew longer and longer.

The Commander in Chief, U.S. Pacific Fleet, asked if the Naval Air Reserve Training Command could help solve the problem by using Reserve Training transport planes and crews. This request initiated the present Southeast Asia airlift.

Today, many Naval Air Reserve Squadrons are spending their two weeks of active duty supporting the airlift.

One of these squadrons is Transport Squadron 772, home-based at NAS LOS ALAMITOS, Calif. Recently, VR-772, led by Commander M. R. Schall, left home and headed for NAS BARBER'S POINT for its two weeks of training. At Barber's Point the squadron's three Douglas C-118B *Liftmasters* were assigned the task of transporting cargo to Vietnam and flying troops out of the combat zone.

When the *Liftmasters* departed Hawaii, each carried two flight crews and a maximum cargo of 15,000 pounds. First stop was Wake Island—2,004 miles and nine hours from Hawaii. At Wake, the crews ate, refueled the planes and made minor repairs. The next morning they headed for Guam and a mandatory 12-hour rest stop.

The following morning they were on their way to Chu Lai. At 15,000 feet the dawn was clear but below was an almost solid overcast —heralding the monsoon season. The weather began to clear as the aircraft approached the Vietnam air corridor. Visible through the scattered clouds and mist, the Vietnam coastline shone a brilliant green and white—the jungle and sand—with no hint of turmoil.

The big transports remained at

high altitude and followed a strictly controlled flight path to Chu Lai, less than 150 miles from the 17th parallel. The *Liftmasters* began a spiralling letdown pattern, directly over the field, in an effort to avoid possible ground fire from certain unfriendly neighbors of the Marines who operate the field.

The landing on the rain-slick aluminum matting runway was uneventful and the planes hurriedly cleared the busy strip. At Chu Lai speed counts. Marine fighter-bombers and helicopters were coming and going at a furious pace—taking off on escort or bombing missions, or on their way to drop rockets and napalm in support of a ground operation just a few miles away.

The three *Liftmasters* were quickly directed to a relatively quiet area and unloading operations began at once. All hands turned to on the unloading and refueling in an effort to make a quick turn around. Now the planes were vulnerable targets for Viet Cong mortar shells—like the ones that hit Chu Lai just two days before. Takeoffs were therefore made quickly, with the best climbout possible to avoid ground fire.

Four hours later the aircraft landed at NAS CUBI POINT for an over-night stop. The next morning, after a routine check of the aircraft and engines, more troops were taken aboard for the trip back—this time to Da Nang.

On the trip into Da Nang, hostilities seemed close as squadron personnel observed a flight of B-52's at high altitude, en route from Guam to drop their bombs on a suspected Viet Cong concentration near Saigon.

AT BUSY *Chu Lai, Marines stand by to board VR-772's C-118 for airlift to Da Nang.*

Da Nang proved an anticlimax after Chu Lai. Chu Lai is a rough-hewn jungle and sand airstrip; Da Nang, a large, modern concrete and asphalt airport with a vast array of modern aerial weapons, including aircraft of all the services and South Vietnamese fighters.

Turn-around time was a little slower here because of the large number of transports coming into the field. Soon the parking ramp was filled with aircraft, fuel trucks, troops and cargo—all waiting their turn for service in an on-again-off-again drizzling rain.

Late the same day VR-772 left Da Nang under a dark, threatening sky. It had been a long and busy three days since the squadron had left Barber's Point and the crews were looking forward to the next stop, Atsugi, Japan—and a day and a half of rest. Then came Tokyo and Yokohama with the usual shopping, sightseeing and picture-taking.

From Atsugi to Barber's Point is a 14½-hour trip, including a refueling stop at Midway.

VR-772 headed home, their training completed. Each major aircraft had flown 18,100 miles and averaged 80 flight hours with no major mechanical flaw. The Reservists had had their training, three plane loads of vital equipment had been delivered to Vietnam, troops had been ferried out of Vietnam to the Philippines and Japan and three plane loads of troops had been airlifted to Vietnam. It had been a successful cruise.

IN DECEMBER 1966, another Los Alamitos squadron, VR-771, received the Vietnam Service Medal for participation in the Vietnam airlift during a two-week training period.

In October, VR-771 left Los Al for Barber's Point, where part of the squadron remained for training. The remaining squadron members continued to Subic Bay where they delivered 1,800 pounds

AT FIRST *rest stop on the way home, VR-772 crew members eat meal in Yokohama.*

PHC ROBERT *Lawson lets local Vietnamese boy help take a photograph at Da Nang.*

TWO CREW *members of Transport Squadron 772 refuel their aircraft at Chu Lai airbase.*

of junior high school history and reading books donated by the Garden Grove, Calif., School District.

From Subic Bay the squadron shuttled men and cargo to and from Chu Lai and Da Nang, delivering a total of 75,000 pounds of priority cargo.

Commander Robert Smith is skipper of Transport Squadron 771.

COMMANDER James A. Blazek, recruiting officer at NARTU ALAMEDA, Calif., received a bonus when he flew the Vietnam airlift route. At Da Nang, he spent five hours with his son, Marine Corporal Gerald J. Blazek.

This is not a luxury afforded every father with a son on the front line in Vietnam. Commander Blazek earned those brief hours when he acted as pilot and plane commander of a NARTU ALAMEDA C-118 that ferried nearly 13,000 pounds of supplies to Vietnam.

The meeting between father and son took place on the crowded airstrip at Da Nang, and, in the words of the father, "ended much too quickly . . . . There were so many things I forgot to ask him."

Cpl. Blazek, a communications technician with the 1st Battalion, 9th Marines, Headquarters and Service Company, repairs and maintains vital communications equipment. But his major concern is stringing wire for radio link-ups in jungle areas. When he heads skyward—to string wire—he knows the surrounding jungle may hide a VC sniper.

When the brief visit between father and son ended, Commander Blazek and his crew boarded their C-118. The aircraft carried over 40 military passengers for the long flight home, and other reunions with other parents.

Commander Blazek, who has been associated with the Reserve program for ten years, flew with an attack torpedo squadron from USS *Enterprise* in the South Pacific during WW II.

This round trip to Southeast Asia airlifting vital cargo was one of nearly 40 performed by NARTU ALAMEDA's active and inactive Reservists on a volunteer basis since May 1965.

Everyone of the Vietnam airlift flights are considered invaluable. They have given allied forces in Vietnam an unbroken chain of badly needed supplies.

NATO ASW Exercise

VP-662, NARTU ANDREWS, Washington, D.C., and VP-671, NAS ATLANTA, Ga., recently took part in a NATO ASW training exercise in Northern Ireland. This was the first time that CNAResTra squadrons participated in the exercises.

The two squadrons joined with Royal Air Force squadrons and Royal Navy surface ships and submarines to learn NATO ASW theories and practices. The 23-day course was held at the Joint Antisubmarine School at Sea Eagle, Londonderry, Northern Ireland.

Commander Harry A. Estes is C.O. of VP-662 and Commander H. L. McKeever skippers VP-671.

Herman-Ridder Trophy

Brigadier General A. H. Adams, Commanding General of Marine Air Reserve Training Command, announced that Marine Air Control Squadron 15, NAS ATLANTA, was the FY-66 winner of the Herman-Ridder Trophy.

The trophy is awarded annually to the most outstanding non-flying squadron in the command. MACS-15 had previously won the trophy in 1950.

All-Navy Cartoonist

GM3 George L. Bettes, winner of the 1966 all-Navy cartoon contest, has joined the Naval Air Reserve at Dallas, Texas. He will drill with VP-702.

Bettes won the contest while stationed at NS TRINIDAD with the regular Navy. When he finished his tour, he decided to join the Weekend Warriors.

While drilling at Dallas, Bettes will be staff artist-cartoonist for the station newspaper, the *Sky Ranger*.

COMMANDER BLAZEK *and his son, the Corporal, during brief reunion at Da Nang.*

Tops in ASW

When Patrol Squadron 822 returned to home base, NAS NEW ORLEANS, recently, they brought with them a top crew—combat ready in antisubmarine warfare.

The 11-man antisub crew won their Alpha status in exercises with the submarine, USS *Amberjack*, while operating out of NAS JACKSONVILLE, Fla. Backed by the entire VP-822 squadron, they accumulated the highest number of points—184 out of a possible 200—in competition with more than 100 other ASW crews in the Naval Air Reserve Training Command.

The NAS NEW ORLEANS crew are also the first crew to reach Alpha status under current CNAResTra ASW directives.

LCdr. Gordon E. Dugal, Jr., was plane commander for the top crew. Commander James H. Baugh, squadron C.O., was copilot.

Sea Kings Replace Sea Bats

In December, the first of several SH-3A *Sea Kings* was delivered to NAS SOUTH WEYMOUTH. The jet-powered helicopters will be used in the station's antisubmarine warfare training program.

Pilots of HS-911 and HS-912 will man the *Sea Kings* which will replace the squadron's SH-34 *Sea Bats*.

Captain John C. Doherty is commanding officer of the station.

Army Briefed by Navy

Eighty-five officers from the Sixth Army Mobilization Group, San Francisco, recently visited NAS ALAMEDA to take a firsthand look at Navy's readiness to mobilize in an emergency.

NARTU ALAMEDA, rated first in CNAResTra, provides training for 3,000 Bay area Naval Air Reservists. LCdr. C. T. Covill, PAO, explained the unit's program.

A CARE-ful PACKAGE FOR PILOTS

Text and Photos by
L. Carter Keck, JO1

FROM THE TOP *of the 60-foot drying towers, parachutes hang full length to dry and allow the escape of static electricity which might cause the nylon to stick and prevent opening.*

IF IT DOESN'T work, bring it back and we'll replace it," is the standard line of every comedian in a Navy parachute loft. Funny it may be, but it's not true.

Actually, parachute riggers take great pride in their work. They have to; their errors are glaring. On the parachute rigger depends the life of every pilot and aircrewman in the Navy. Almost all survival gear has become the province of the parachute rigger. Today he is appropriately called an "Aircrew Survival Equipmentman."

A typical parachute loft is that at NAS MOFFETT FIELD, Calif. The building is nothing special, just a concrete and metal structure in an over-size and otherwise vacant lot.

Inside the cool clean building are several long tables with smooth, polished tops for packing 'chutes. Sewing machines occupy one corner of the main room. Two side rooms hold life rafts, life vests, personal survival gear and a testing laboratory for oxygen equipment.

An inconspicuous door opens from the main loft into the bottom of a 60-foot drying tower. In the tower, parachutes are hung full length for 24 hours to dry and allow static electricity to escape. Moisture and static electricity might prevent the nylon 'chutes from opening properly.

When the 'chute is removed from the tower, it is spread on a table. A man on either side of the table rapidly lifts each shroud line and places it over his neck, thus folding the 'chute and at the same time assuring that each line is in proper sequence.

Next, using instruments which resemble out-size buttonhooks, the riggers carefully place the shroud lines in holding loops in the pack, then stow the 'chute in the nylon casing on which the pilot sits.

But parachutes are only a small part of the duties of Aircrew Survival Equipmentmen. They must maintain and issue such diverse items as inflatable life rafts, shark repellent, dye markers, flares, first aid and survival kits and life vests.

The pararriggers must also refill and maintain a supply of CO_2 bottles for use with inflatable gear. They must build up, repair, check and test all oxygen-breathing regulators and related equipment.

They are proud of their work. At Moffett Field, there's a feeling that any one of them would be willing to jump any time with any parachute he had packed.

ONCE PARACHUTE *is folded, shroud lines are inserted in loops in the pack. When a 'chute saves a life, the packer receives a certificate.*

PARACHUTE *Riggers deserve the title, "Aircrew Survival Equipmentmen," for they maintain life vests, rafts and other survival gear.*

FLEET AIR WINGS ON PATROL

Flying with the Japanese

Late in 1966, aviation units of the Japanese Maritime Self Defense Force (JMSDF) joined with the U.S. Navy air antisubmarine warfare forces for three weeks of training exercises in Hawaii.

Seventy officers and men under the command of Captain Koji Yaita arrived at NAS BARBER'S POINT to participate in exercises with Navy's Antisubmarine Warfare Group One.

The flight phase for the visiting Japanese Detachment began with four-hour area familiarization flights for the six *Neptunes* of the Japanese. A VP-28 pilot accompanied the training flights. After that, exercises began in earnest. VP-4, VP-22 and VP-28 of Fleet Air Wing Two assisted the detachment in practicing torpedo firing and aerial mine-laying.

In operational exercises the JMSDF P-2's and the USN P-3's began flying 10-hour patrols over Hawaiian waters.

While not training in the air, JMSDF aircrewmen received instruction in the latest antisubmarine warfare electronics equipment and sophisticated weapons delivery techniques.

The simulated "hot and cold war" maneuvers increased the efficiency of all participating units.

Another Safety Milestone

VP-47 announces that it has completed 40,000 accident-free hours of flying. This total was accumulated over a four-year period which included the transition from P-5 to P-3 aircraft that began in March 1965. At this same time, the squadron changed home ports from NAS WHIDBEY to NAS MOFFETT FIELD.

In July 1966, the command completed a six-month deployment to WestPac with nine aircraft and 12 crews in support of the 7th Fleet.

Recognition Ceremony

Three advancements, two letters of appreciation and the presentation of Aircrewman Wings were the occasion for special ceremonies for VP-31 at Nas NORTH ISLAND.

A P-3 ORION, *belonging to Patrol Squadron 28 of Fleet Air Wing Two, rendezvouses with two Japanese Maritime Self Defense Force P-2 Neptunes off the coast of Oahu, Hawaii.*

Commander George Prassinos, squadron C.O., presented Aircrewman Wings to ATR3 Daniel L. Bassinger.

Recognized for recent advancements to the grades indicated here were AT1 Garfield H. Van Aller, AB2 Norman L. Spires and AT3 Richard G. Hiles.

For contributing to the support of supply efforts in Vietnam, SK1 Elmer Webb, Jr., received a letter of appreciation from the commanding officer of First Marine Air Wing.

AM2 Robert R. Kasten received a letter of appreciation from the commanding officer of NAS GLENVIEW for "updating the flight qualifications of the personnel of VR-722 and the airlifting of high priority material to the Western Pacific Theater."

'Blue Sharks' Head South

Patrol Squadron Six has come south for the winter. As 1966 drew to a close, the Adak, Alaska, six-month deployment for the *Blue Sharks* ended.

Throughout the deployment in an area that provides challenging ASW flying, patrol reconnaissance, relocation and submarine search constituted the routine "Plan of the Day." Occasionally, the squadron departed from its standard flying missions to assist in medical evacuation and ice relocation flights in the Arctic for Fleet Weather Central, NS KODIAK. The *Blue Sharks* logged 7,500 hours in the Aleutian area before returning to Hawaii.

VP-10 Commended

At the formal change-of-command ceremonies in which Commander Karl J. Bernstein relieved Commander Liona R. Roberts, Jr., Rear Admiral Alfred R. Matter, ComFAirWingsLant, was the principal speaker.

The ceremony was highlighted by the presentation of the CNO Aviation Safety Award for fiscal year 1966. Rear Admiral Matter cited VP-10's record: 42,500 hours flown without an accident since late in 1961; 9,500 hours in the last year. He pointed out that VP-10's record was achieved in a year when it transitioned from the P-2 *Neptunes* to the P-3 *Orions*.

VP-18 Reports

VP-18 is placing increasing emphasis on career counselling and it is paying off. During a recent week, the squadron had three ship-overs: two career petty officers and one first tour enlistee, each signing for six years.

A detachment of VP-18 took part in the multi-nation exercise, *UNITAS VII*. The detachment from the Roosevelt Roads squadron was a small part of an operation which involved over 15,000 men, 55 ships and 14 aircraft units from the countries of Columbia, Ecuador, Peru,

Chile, Uruguay, Brazil, Venezuela and the United States.

VP-18 has a new commanding officer, Commander A. L. Zicht. He relieved Cdr. R. W. Deffenbaugh.

Crew Exchange

Recently VP-1 exchanged crews with Maritime Patrol Squadron 407 of the Royal Canadian Air Force. VP-1 sent Crew Seven to Comox, B.C., and Canadian 407 sent its Crew One for the three-day trade. Both fly the SP-2H *Neptunes*.

Flying Officer Doug Hutchison, copilot of the Canadian crew, said that a great deal of information was exchanged on ASW problems. Both crews flew an operational patrol under the respective commands.

VP-44's Five Years of Safety

VP-44 has to its credit 36,000 accident-free flight hours over the past five years. Translated into terms of distance, the squadron has flown the equivalent of three round trips to the moon while accumulating the record. Commanded by Commander E. C. Waller, VP-44 flies P-3 *Orions* from its base at NAS PATUXENT RIVER, Md.

VP-5 Now Flies Orions

The *Mad Foxes* of VP-5 returned recently to operational status after more than five months of transition training. Commander M. D. March, C.O., flew the outfit's first operational patrol in one of VP-5's *Orions*.

"Piston," "mixture," and "throttle" are no longer heard in the *Foxes'* den. These words have been replaced by "turbine," "compressor," and "power lever."

LCDR. F. L. *Hering, VP-21's safety officer, believes the squadron's new safety flash board will help the squadron continue to maintain its record: 88,000 accident-free flying hours in the past nine years. AZ2 O. L. Paradise of the maintenance office gets the latest word posted on the board.*

Beneficial Suggestion Pays Off

Commander A. E. Clemente of VP-1 presented AX3 Hal S. Dumas III a check for $300.00 from the U.S. government for a beneficial suggestion which results in an estimated saving of approximately 3,000 man-hours.

Dumas developed a new machine accounting system for the control of Fleet replacement personnel. His previous training and rating as a machine accountant enabled him to replace the manual method of student control.

A letter of commendation stated that "the system will contribute significantly to the improvement of over-all readiness of Pacific Fleet patrol squadrons."

Trophy Winners

NavAirLant's VP-49 and NavAirPac's VP-17 are the first winners of the CNO Aircraft Maintenance Awards for patrol squadrons. The trophies are the gift of the Lockheed Company. Winners hold the trophy for a year, but the scrolls each is given are the permanent possession of the squadrons.

Commander Leland A. Holdren is commanding officer and LCdr. W. G. Eason is maintenance officer of VP-17. In VP-49 these positions are held by Commander J. S. McCaig and LCdr. C. M. Wolf. The presentation for VP-17 was made at MCAS IWAKUNI, Japan; for VP-49, at NAS PATUXENT RIVER, Md.

VP-17 also won for fiscal year 1966 CNO's Aviation Safety Award. The award was presented at Iwakuni by Rear Admiral Marshall W. White, Commander Fleet Air, Western Pacific. During FY 1966, VP-17 flew over 11,000 acident-free hours. The squadron flies the P-2 *Neptune*.

VP-17 arrived at USNS SANGLEY POINT, Republic of the Philippines, on December 5 after serving with Fleet Air Wing Six at Iwakuni, Japan, for 2½ months. At Sangley, VP-17 continues to maintain a detachment of aircraft in Vietnam for the *Market Time* missions which were set up to curtail Viet Cong infiltration from the sea.

RADM. WHITE *presents CNO Aviation Safety Award to Cdr. Holdren, VP-17. The unit also won the Aircraft Maintenance Trophy.*

LOOKING *at CNO Aircraft Maintenance Trophy are Cdr. McCaig, VP-49 C.O., LCdr. Wolf, Lockheed's C. M. Geist, RAdm. Matter.*

AT SEA WITH THE CARRIERS

DAMAGED *A-4, flown back to Coral Sea by Lt. Jerry P. Shafer, is cleared from the flight deck. Half of left wing is shot away.*

CONNIE *crewmen conduct their ship's first dual underway replenishment. Unrep ships are Castor, Caliente; destroyer, Stormes.*

ARRIVING *aboard Constellation in the Tonkin Gulf, Adm. David L. McDonald, CNO, is greeted by VAdm. John J. Hyland, Com7thFlt.*

PACIFIC FLEET

CORAL SEA (CVA-43)

When VA-23's Lt. Jerry P. Shafer landed aboard *Coral Sea* recently after being launched on a strike mission near Haiphong in North Vietnam, he set down with half his A-4 *Skyhawk's* left wing shot completely away.

The lieutenant's aircraft was severely damaged seconds after he dropped his load of bombs on a military installation. Fire in the left wing went out after a few minutes, but flared up each time the pilot tried to refuel from a tanker aircraft. Result: He'd have to make his first try a good one.

With the emergency barricade rigged, Lt. Shafer set the *Skyhawk* down on *Coral Sea's* flight deck. The little jet's left landing gear collapsed; the plane slid down the deck until it was stopped by the barrier.

A slightly shaken Lt. Shafer exited uninjured from the A-4—to the applause of his peers, who said he demonstrated "outstanding technique and coolness under pressure."

Another *Coral Sea* crewman who "kept his cool" in an emergency was SN Francisco Ortiz. A member of a line-handling party during an underway refueling operation, he fell overboard when a sudden roll by the ship snapped cables taut and threw him off balance.

"All I could think of after I hit the water were the things I had been told to do," Ortiz said later. "I took off my shoes and tried to swim away from the propellers."

He heard "Man overboard" called away, and so did Ltjg. Larry Jay Vernon and Ens. Jack M. Mulcahy, pilots of the ship's "Angel" helicopter. They lifted off the ship's flight deck and, after a rescue Ltjg. Vernon said was "right out of the training manual," had a slightly dampened but uninjured seaman back aboard his carrier—four minutes after his shipmates notified the bridge he had fallen into the water.

The rescue was actually effected by helo crewmen Larry R. Leaming, who entered the water to help Ortiz, and Barry L. Fleck.

An A-4 *Skyhawk* piloted by VA-22's C.O., Cdr. Duff Arnold, made CVA-43's 160,000th arrestment.

CONSTELLATION (CVA-64)

Connie and her embarked air wing, CVW-15, have returned to home port, San Diego, after nearly seven months with the Seventh Fleet in WestPac. The ship left San Diego May 12.

During operations on the line in the South China Sea, *Connie* pilots flew more than 9,000 combat sorties and dropped almost 11,000 tons of ordnance on enemy targets. Before their ship left the line, CVW-15 pilots completed their fourth period in combat action by blasting the Thanh Hoa bridge in North Vietnam. They also knocked out a radar site and destroyed five trucks.

Arrested landing number 50,000 was made while CVA-64 was in WestPac. Commander John J. Chambers, C.O. of VF-151, set the mark when he caught the arresting wires in an F-4 *Phantom II*.

And, before they returned home, members of the Protestant congregation aboard the six-year-old CVA donated $288.36 to the Shiroyama Home for Homeless Children near Yokosuka, Japan.

En route to San Diego, enlisted men from the ship's OC Division and VAW-11's Det. Delta were served steak dinners by their department head, division officers and chief petty officers because they had the cleanest and best-kept spaces in the ship.

Commander Charles H. Lindberg, *Connie's* X.O., hit upon the steak dinner scheme to give his men added incentive to get their spaces ready for an inspection, held just before the ship arrived in San Diego. For a week or more *Connie* was alive with wet paint, scrub brushes and men swabbing decks as if their next meal depended on it—which, in fact, was close to the truth.

OC Division and VAW-11 took top honors, tying with perfect scores of "outstanding" and their officers and CPO's, from commander down, donned cooks' dress to grill steaks and serve them to the hungry men.

As he put away his last bite of steak, one seaman said, "It was worth all the work to get this great chow—and the service wasn't too bad, either."

A HAPPY *LCdr. E. W. Wingerter stands by his plane after making 500th arrestment.*

F. D. ROOSEVELT (CVA-42)

Immediately after their carrier returned to the Gulf of Tonkin from a brief in-port period, pilots of *FDR's* embarked CVW-1 were launched on strikes against targets in North Vietnam. They hit cargo barges, a ship repair yard and a supply transshipment area. Later, they teamed with pilots from *Ticonderoga* to attack a vehicle storage and repair depot five miles south of Hanoi, striking through what was reported to be the most intense AA fire encountered during the war.

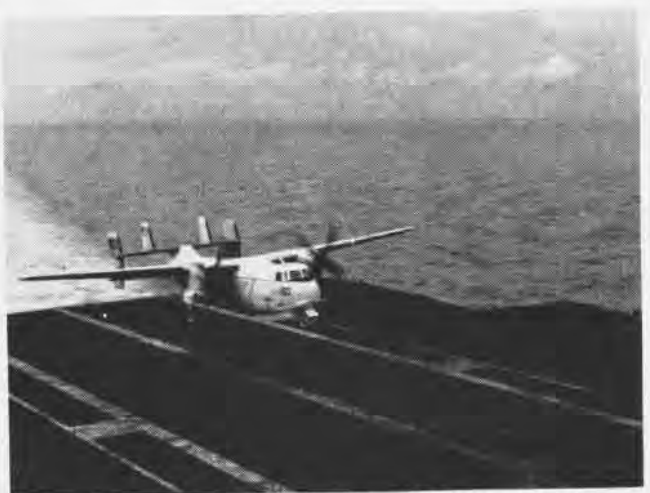
When LCdr. E. W. Wingerter "trapped" aboard *FDR* after completing a strike mission recently, he marked up his 500th arrestment. One of two landing signal officers on the CVW-1 staff, LCdr. Wingerter has made most of his arrested landings in A-4's.

KITTY HAWK (CVA-63)

The Navy's newest cargo transport plane, the Grumman-built C-2A *Greyhound*, made its first operational delivery in a combat zone recently when it landed aboard *Kitty Hawk* as the carrier steamed in the Gulf of Tonkin. On hand to meet the newest addition to Naval Aviation's COD service were Rear Admiral David C. Richardson, CTF-77, and *Kitty Hawk's* X.O., Commander P. F. Werner.

Senator Strom Thurmond (S.C.) flew aboard *Kitty Hawk* during strike operations. A member of

EVEN *the cook—Ops Officer, Cdr. Nello Pierozzi—was allowed to join OC Division men in the steak dinner they won as prize.*



FIRST *landing of the new C-2A Greyhound COD aircraft in the combat zone came when the cargo plane set down aboard Kitty Hawk.*

the Armed Services Committee, he made *Kitty Hawk* an overnight stop during a tour of Vietnam.

TICONDEROGA (CVA-14)

Captain Ward Miller relieved Captain J. B. Cain as C.O. of *Tico* during a change-of-command ceremony at Subic Bay, R.P.

CVA-14 crewmen played host to some 6,000 Japanese visitors during an earlier in-port period in Yokosuka. Highlights of the open house included a ride on one of the ship's aircraft elevators and several displays, among them a "see yourself on TV" display using *Tico's* portable video tape recorder unit. The ComCarDiv Three band provided musical entertainment.

IWO JIMA (LPH-2)

A volunteer band made up of *Iwo Jima* crew members had a busy time of it during a recent stay in Sasebo, Japan. In addition to playing each morning at colors, they participated in local events for Japanese audiences. The band was organized last June by Commander John Bontrager, the chaplain on the *Iwo Jima*.

PRINCETON (LPH-5)

Two resolutions, one honoring *Princeton* and the other commending her skipper, Captain Tazewell Shepard, Jr., were adopted by the Los Angeles City Council after the LPH returned to home port, Long Beach, from a 6½-month cruise in waters off Vietnam.

Princeton was commended for her "contributions to combat operations and surgical team operations resulting in the saving of many lives." Captain Shepard was cited for his "distinguished service."

"Planning Your Future," a seminar presented by the Naval Career Information Team, was the highlight of a dependents' gathering in *Princeton's* wardroom that was attended by more than 200 officers, enlisted men, wives and fiancees. The presentation was conducted by LCdr. C. L. Smith, team OinC.

The striking changes in the U.S. Navy and the nature of the wars in which Navy men have been involved were two of the topics discussed by Captain Shepard in a speech at a meeting of the Southwest Los Angeles Rotary Club.

ENJOYING *his tour aboard Ticonderoga, a young visitor tries out an A-1 Skyraider.*

RANGER (CVA-61)

The commissioning pennant from an earlier USS *Ranger*, CV-4, was presented to the present carrier's skipper, Captain William E. Donnelly, Jr., by ex-Navy quartermaster Harold J. Becker of Tacoma, Wash.

A crew member of CV-4 for eight months before she was decommissioned, Becker removed the pennant from the ship's mast just before she was dismantled. He kept it for 20 years and presented it to the modern *Ranger* after he read that the ship had returned from Vietnam and docked at Bremerton.

BENNINGTON (CVS-20)

Under command of Captain Richard Graffy, *Benn* has joined units of the Seventh Fleet. The CVS completed an operational readiness evaluation and visited Hawaii and Yokosuka, Japan, before taking up station in the South China Sea.

IWO JIMA *crewmen find time during operations off Vietnam's coast for small talk.*

ENTERPRISE (CVAN-65)

The Big E has left her new home port, Alameda, Calif., after five months in the San Francisco area, on the first leg of her second cruise to WestPac.

CVAN-65 returned from the Far East last June 21, completing the first tour on the line by a nuclear-powered carrier (*Naval Aviation News*, September 1966).

ATLANTIC FLEET

AMERICA (CVA-66)

America, along with 93 other ships, 19 squadrons and 5,000 Marines, participated in *Lantflex 66*, an Atlantic Fleet exercise held in mid-Atlantic and the Carribean. Directed by Vice Admiral Bernard A. Clarey, ComSecondFlt, *Lantflex 66* was designed to test and sharpen the operating effectiveness of Fleet forces in all aspects of naval warfare.

Before she left home port, Norfolk, to join *Lantflex 66* units, *America* was visited by 43 members of the NATO Flag Officers Symposium who were hosted by Admiral Thomas H. Moorer, Supreme Allied Commander Atlantic and CinCLantFlt.

Pilots of VF-101's Detachment Oceana, commissioned just six months ago, have made their unit's 1,000th arrested landing aboard *America*.

FORRESTAL (CVA-59)

Forrestal crewmen had a pair of busy days recently as workmen at the Norfolk Naval Shipyard entered the last stages of a nine-month, $50 million overhaul. For the first time in almost eight months, they manned the bridge and tested their ship's four new catapults. Also tested were communications circuits, the port anchor and the ship's engines.

Vice Admiral Charles T. Booth, ComNavAirLant, accompanied by Rear Admiral James Brown, shipyard commander, made a progress inspection of the CVA. They were briefed by Captain John K. Beling, *Forrestal's* skipper.

INDEPENDENCE OPERATES IN MEDITERRANEAN WATERS AFTER PLAYING HOST TO U.S. AMBASSADOR TO FRANCE

GUAM (LPH-9)

Five ships of the Atlantic Fleet's Amphibious Force, including *Guam*, steamed out of home port for a three-month deployment to the Caribbean. Assigned to Amphibious Squadron Eight, the ships relieved units of Amphibious Squadron Ten, including the LPH *Boxer*.

RANDOLPH (CVS-15)

A five-week overhaul at the Boston Naval Shipyard completed, *Randolph* returned to Norfolk.

Randolph didn't stay home long, however. During subsequent operations, her aircraft handling crews recorded their 74th consecutive day of moving aircraft on the flight deck without an accident. While the claim may cause a reaction aboard other ASW carriers, CVS-15 crewmen contend going that many days without a "crunch" constitutes a record for their type ship.

Working under LCdr. Paul G. Kilpatrick, flight deck officer, the flight deck crews accomplished 8,560 aircraft moves; their previous "crunchless" mark was 2,668 in 26 days.

Also coming in for their share of credit in the hard-work department were men assigned to *Randolph's* Third Division. During underway refueling operations with the oiler *Mississinewa*, they had the transfer rigs up and oil flowing in less than five minutes. Captain W. H. Alexander, *Mississinewa's* skipper, told CVS-15's C.O., Captain William J. Moran, the operation was "the fastest and smartest" he'd seen since taking command of his ship.

WASP (CVS-18)

The Boston-based *Wasp* is another Atlantic Fleet ship that participated in *Lantflex 66*.

Four career Navy men aboard *Wasp* got a real high-flying Navy officer to come down to earth to ship them over when they reenlisted recently. The officer was Captain James A. Lovell, Jr., *Gemini 12* astronaut who had been picked up, along with Air Force Maj. Edwin E. Aldrin, by *Wasp* helicopters after the last *Gemini* flight.

Less than five hours after the recovery, Captain Lovell gave the oath to AG2 William C. Geitz, RM2 Arthur H. Swift, ABH3 Ralph H. Morris and FN Arthur Stiles.

INTREPID (CVS-11)

Intrepid has returned to home port, Norfolk, after a seven-month deployment with the Seventh Fleet off Vietnam. The CVS operated as a light attack carrier during her tour. CVS-11 crewmen took their ship out of Norfolk April 4 and launched their first strikes May 15.

During the cruise, *Intrepid* steamed some 75,000 miles—including 13,000 miles across the Atlantic and the Mediterranean, through the Suez Canal and into the South China Sea. Squadrons of CVW-10 flew almost 7,600 attack sorties against enemy targets and dropped more than 9,000 tons of ordnance.

The *Fighting I* is skippered by Captain John W. Fair, who received the Navy's fifth highest award, the Legion of Merit, "for exceptionally meritorious conduct in the performance of outstanding service . . . during combat operations in Southeast Asia." The award was presented to Captain Fair by Admiral Booth.

INDEPENDENCE (CVA-62)

Charles E. Bohlen, U.S. Ambassador to France, boarded *Independence* for an orientation visit while the carrier operated with units of the Sixth Fleet in the Mediterranean.

Captain Frederick H. Carter of Marine Attack Squadron 324 made CVA-62's 91,000th arrested landing in an A-4E *Skyhawk*.

THE MEN WHO MAN THE SHIP ON THE LINE

Photos by PH1 Jerry Goss and SA T. L. MacBride

WHETHER they're hard at work, catching up on sleep or letters from home during a lull in continuing flight operations, or just contemplating the day's work ahead, the men who make up the crew of a carrier like the *Franklin D. Roosevelt* are excellent subjects for a couple of sharp photographers who know how to mirror the many facets of a sailor's day. JO1 Haywood Mitchell, writing about his ship, called combat operations off Vietnam "vital and unrelenting"—and the description seems to apply to *FDR's* crew members as well.

PILOT FATIGUE LIMITS SOUGHT AT MUGU

PR1 GILMORE *asks Lt. Polski about his Mk 5 anti-exposure suit. The box near Gilmore's hand is a battery-powered tele-thermometer used to take the pilot's skin temperature.*

LT. POLSKI *gets into a harness which is specially wired to gather scientific data.*

By Ltjg. Lee H. Leger

HOW MUCH work can a pilot do before his performance deteriorates? When does he cease to be an effective part of the weapon system? These are but two of the space age questions which the aviation physiology and survival training unit at the Naval Missile Center, Point Mugu, is trying to answer.

The unit, headed by Navy aviation physiologist LCdr. Frank J. Formeller, is deeply involved in physiological studies connected with several weapon systems, particularly the A-7A *Corsair II*. It is also evaluating survival equipment and running tests on other types of aircraft, including the F-4 *Phantom II* and F-8 *Crusader*.

"A major problem in studying pilot fatigue and stress and in evaluating equipment and aircraft," LCdr. Formeller says, "is the need for better physiological guidelines. We don't really know just how much work a pilot can do. We don't have enough physical parameters—no set limits for stress and fatigue in military flying."

The unit is now working to establish such guidelines by measuring changes in body temperature, respiration and blood pressure in stress and fatigue test situations.

"We have discovered that honest, objective pilot interviews are valuable in physiological testing," LCdr. Formeller continues. "At times, pilots are so busy navigating and flying the aircraft that they are unaware of physical conditions, such as improper air ventilation or temperature. Also, it is possible for a pilot to adjust to excessive cockpit noise so that he doesn't realize his hearing is being impaired."

PR1 John Gilmore, Formeller's assistant, is doing some of the studies in connection with the A-7A aircraft. Gilmore, an 11-year Navy veteran, has been assigned to the unit for five months. Under LCdr. Formeller's guidance, he has programmed several pilot physiological measurement studies.

The primary emphasis in the *Corsair II* studies concerns the effect on pilots of the Mk 5 anti-exposure suit and related gear. This is a part of the complete A-7A evaluation. Lt. Paul A. Polski is the flight test pilot.

"By means of these tests," Gilmore explains, "we hope to determine the pilot's compatibility with the aircraft. The data I obtain will indicate the areas that should be investigated more thoroughly."

In addition to Gilmore's studies, Richard Tegt, head of the bioacoustics branch, is conducting A-7A cockpit noise tests. His helmet attenuation and cockpit noise studies will be related to other physiological data to evaluate pilot performance.

LCdr. Formeller hopes that progress will continue to be made by the Navy in establishing a scale for matching equipment with personnel.

"Maybe some day we'll understand the physiological factors well enough to build a weapon system that is so compatible with a human being that the man and the system combined will operate as efficiently as the human heart."

Field Hospital Dedicated

Expanded Facilities in Vietnam

Recently, a new field hospital was dedicated in the Marine Aircraft Group 12 area in Vietnam.

The figure-eight shaped hospital was designed and planned by Navy hospital corpsman, PO1 Gerald D. Angelley. The new facility, built by Seabee Mobile Construction Battalion Three, features cement floors, air-conditioning and fluorescent lighting. The new dispensary can handle 20 patients compared to the old hospital capacity of six.

Colonel Jay W. Hubbard is commanding officer of MAG 12.

New Carrier Approach Gear

Tested under Battle Conditions

An automatic engine-throttle-control, developed by the Naval Air Systems Command, is being installed on Navy first-line, carrier-based jets to assist pilots in making safe landings under night and all-weather conditions.

Installation has been completed in F-8 *Crusader* and RA-5C *Vigilante* aircraft. New aircraft, such as the F-111B and the A-7A, will be delivered with the device installed.

Called "APC" for Approach Power Compensater, the automatic, electronic device accurately controls airspeed during the landing, heretofore the pilot's task. APC allows him to concentrate on acquisition of glide slope to touchdown and arresting-wire engagement.

Operational experience is currently being gained under the severest possible operating conditions in the Gulf of Tonkin and the South China Sea off Vietnam where Navy and Marine Corps pilots frequently must land aboard a carrier in deteriorating weather, rough seas and poor visibility. The use of APC during the critical last seconds before touchdown has significantly reduced the landing-accident rate aboard carriers.

The Federal Aviation Agency and commercial airlines are considering the use of the APC as part of proposed landing systems.

New Gloves Being Tested

Aid to Downed Pilots and Divers

The hottest item under development at the Naval Missile Center, Point Mugu, Calif., is a pair of gloves. The gloves are an initial step in the design of a new flight suit.

Ken Tinklepaugh and Charles J. Crowell, Jr., of the Advanced Program Division of the Center's lab, have developed the specially designed gloves and a thermal cream to be used in them. When

NEW CREAM IS INSERTED IN GLOVE

the thermal cream is mixed with sea water in the gloves, heat is produced.

Two pairs of gloves are being tested in the 38° water temperature of the North Sea. Another pair is being evaluated at the Navy's Air Crew Equipment Laboratory at Philadelphia.

The new flight suit will incorporate the thermal-cream heating idea. A tiny pump in the pilot's life raft will circulate the heated water through ducts in the suit. During flight, the suit will be connected to the plane's air-conditioning system.

The glove and suit are being designed to take advantage of the environment in which a diver or downed pilot finds himself.

Editor's Corner

MIDGET MOVER. In her excellent column for the Seabee *Coverall*, station paper for the Port Hueneme, Calif., Construction Battalion Center, Editor Marie Levi notes that Seabees are using a toy-sized scraper for their earth-moving operations in Vietnam.

The scraper may be small, but it's really no toy. It has a capacity of four cubic yards and is designed to meet the need for equipment that can be airlifted, in an emergency, to small, remote airfields.

Three of the scrapers have already been flown to Vietnam; one went to Mobile Construction Battalion Ten for airlifting to the Special Forces Camp at Khe Sanh where a detachment of Seabees is enlarging and improving the airstrip.

"The battalion's mechanics took one look at the mighty midget and got out the paint can," Marie writes. "On its side they lettered: 'It's swell; it's Mattel.' "

A Phone Call Away. Even when they're at sea aboard the ASW carrier *Wasp*, VS-28 officers and enlisted men are still only a phone call away from their homes. Thanks to the capabilities of the *Wasp's* ham radio club and the cooperation of civilian ham operators, squadron personnel keep in touch with families in Quonset Point, Rhode Island, through a device known as a phone patch.

It works this way: A "ham" living near Quonset connects by radio with his *Wasp* counterparts to find out which crewman wants to talk with his wife. He makes a long-distance collect call to the "better half," then patches in the phone to the radio so husband and wife can communicate. The only cost is the price of the "ham's" phone call.

Use of this means for calling home from *Wasp* is undoubtedly not limited to VS-28, but it was this squadron that went on record recently to "salute the patriotism, enthusiasm and ability of American ham radio operators."

CONFUCIUS WRONG? The editorial staff of *The Missile*, PMR POINT MUGU's station paper, thinks Confucius may have been all wet when he said one picture is worth 10,000 words. They note that, in 10,000 words, you can have the Lord's Prayer, the 23rd Psalm, the Hippocratic Oath, Lincoln's Gettysburg Address, the preamble to the Constitution, the Declaration of Independence, a Shakespearean sonnet and almost all of the Boy Scout Oath.

"Most people wouldn't trade those thousands of words for any picture ever produced," the *Missile* staff contends.

Seeing the Mission Through. Personnel assigned to the stores ship *Mars* think DoD funding controllers will be happy to learn one of their ship's UH-46 helicopters saved the U.S. government some money during a vertical replenishment off Vietnam.

"A bundle of good ol' U.S. issue mops disentangled itself from an external load of hardware being vertrepped to USS *Whetstone* (LSD-27)," they write, "and was quickly picked out of the water by a small Vietnamese fishing boat, which rapidly scurried away."

Sailors in a nearby LCM noticed the incident, and were of the opinion that the fishermen really didn't deserve such a windfall from Uncle Sam. They sent their craft in hot pursuit of the boat, and soon relieved the fishermen of their booty.

"Notwithstanding the fact that the LCM could have used the mops profitably itself, the ever-vigilant helo crew, intent on completing the mission, set out after the craft, hovered overhead and hoisted the mops back aboard," *Mars* men continue. "By this time the mops were nicely impregnated with water, all ready for their rightful owners in *Whetstone* to put to immediate use."

SNOW JOKE. The following is attributed to N. T. Taylor, meteorology instructor, in an article in the Canadian Flight Safety Director's *Flight Comments*: "Snow, like a woman, may lie there looking pure, white and soft, but you should never trust her until she gets old and crusty."

LCDR. EDGAR L. DEVRIES, VS-28, USES HAM FACILITIES TO CALL HIS WIFE WHILE WASP STEAMS AT SEA

LETTERS

Glossary Needed

SIRS: Although I am not an aviator, I have read for many years with great interest the Grampaw Pettibone pages in *Naval Aviation News*. This stems from my association with Naval Aviation as a communications officer in WW II.

My problem—and perhaps it is also the problem of other non-Naval Aviator readers—is that the ever-changing terminology of Aviation and Naval Aviators makes it harder and harder to understand the accident or near-accident accounts on Gramp's pages. (Mind you, this applies only to the accounts and not to Gramp's comments—these come through loud and clear.) One of the best examples of this is "Between a Rock" in the December 1966 issue.

I realize that Gramp's department is intended to help aviators avoid aircraft accidents, that speaking to them in their language makes it more effective and that it would be unwise to reduce this effectiveness by diluting it. But isn't there something that can be done to make Grampaw Pettibone more intelligible to the interested layman? How about a short glossary of the principal abbreviations and terms appearing on his pages?

HENRY E. STEVENSON

Arlington Annex
Washington, D.C. 20370

¶ Ole Gramps does get carried away with terminology at times. "Far be it from me to alienate any readers," Gramps says. "If you'll bear with me, I'll do my best to annotate any and all new abbreviations introduced in the future."

An excellent aeronautical dictionary, compiled by the National Aeronautics and Space Administration (NavAer 00-80R-30), is tailored to the novice and interested non-professional without doing violence to the sensibilities of the profession.

Thank you for your interest and constructive criticism.

Help Wanted

SIRS: I am writing an article for the *Journal* of the American Aviation Historical Society. It covers the various types of training aircraft used at NAS CORPUS CHRISTI and associated southern Texas training stations in the past. I have now reached a point where I find it difficult to obtain information on a few planes which were at Corpus Christi for certain time periods. Any help by NANEWS readers will be appreciated. Material lent will be fully credited and returned as rapidly as possible.

I need the following information about, and personal recollections of, these aircraft: (1) Timm "plastic" trainer, Rodd Field and NAS CORPUS CHRISTI, late 1943; (2) PBY's of Squadron 18A and 18B, 1942, particularly aircraft BuNo. 2291; (3) *Devastators*, used briefly by Flights 1 and 2 of VN-16 during 1942; (4) *Dauntlesses*, used by Squadron 19A at Chase (indoctrination) and regular Squadron 19 at Cuddihy, mid-1944 to end of the war; (5) Curtiss SNC-1's, used by Squadrons 14 and 15 in 1942; (6) PV2 *Harpoons*, used by ATU-11, Corpus Christi, 1947-48.

Last but not least, I need some positive identification for several N2S trainers used by Squadron 1B at Cabaniss in 1946. These had a sliding canopy which extended over both cockpits.

HARRY B. ADAMS

Del Mar College
Corpus Christi, Texas 78404

Ocean Voyage in a Capsule

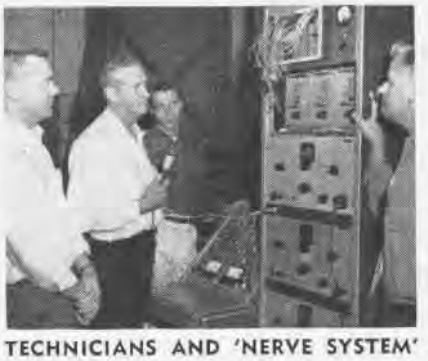
Simulator for Sound and Motion

Researchers at the Naval Aerospace Medical Institute, Pensacola, Fla., have captured the ocean's movements in the laboratory. Using a Ship Motion Simulator, a person can sail the seven seas—in all kinds of weather—and never leave the laboratory.

The simulator, originally designed by Boeing Company, Seattle, duplicates the motion and sound of a ship at sea and records the effect of vertical and roll motions on man.

Dr. Charles D. Wood, a pharmacologist at the University of Arkansas Medical School, working as an associate of Dr. Ashton Graybiel, NAMI's Director of Research, will be the first to use the device at the Institute. He is doing drug studies on motion sickness.

The device consists of a capsule, an enclosed metal cabinet resembling a miniature railroad boxcar, which contains electronic and communications equipment. The capsule sits on a 20-foot curved track. The capsule rolls from side to side as the track is raised and lowered, producing the effect of pitching and rolling at sea. At the same time, recorded sounds of the sea are heard. The physiological reactions of the subject are registered and recorded as he rolls and pitches up and down with the sound of the sea in his ears.



TECHNICIANS AND 'NERVE SYSTEM'

In the picture, NAMI technicians are shown with the "nerve system" of the simulator.

J79-GE-10 Engine Tested

Scheduled to Power New F-4J

The first phase of the accelerated service testing of the J79-10 engines was completed on October 28, 1966, at NATC PATUXENT RIVER, after 290 hours flight time. This total was accumulated in a period of 95 days, an NATC record for the utilization of a single F-4. A second phase of 150 hours began in early December.

The J79-GE-10 engine is an upgraded version of the J79-8 engine.

NAVAL AVIATION FILMS

Among the latest motion picture films released by the Film Distribution Department, U.S. Naval Photographic Center, the following should prove of particular interest to personnel in Naval Aviation:

MN-10130A (unclassified) *The Naval Aircraft Maintenance Program—Introduction.* How the Naval Aircraft Maintenance Program is established and the level of maintenance performed at each type facility—24 minutes.

MN-10232A2 (unclassified) *DASH—Drone Antisubmarine Helicopter* — 30 minutes.

MN-10270 (confidential) *Improved Aircraft Rearming (U).* Problems of rearming today's aircraft with greater quantities of complex ordnance in lesser time periods of modern attack warfare. Interim solutions and long-range goal of coordinating assembly, packaging, stowage and handling of ordnance into one over-all concept (U)—22 minutes.

MN-10124B (unclassified) *The Type C Mk 11-1 Catapult.* How the catapult works and the operational duties of the catapult crew—15 minutes.

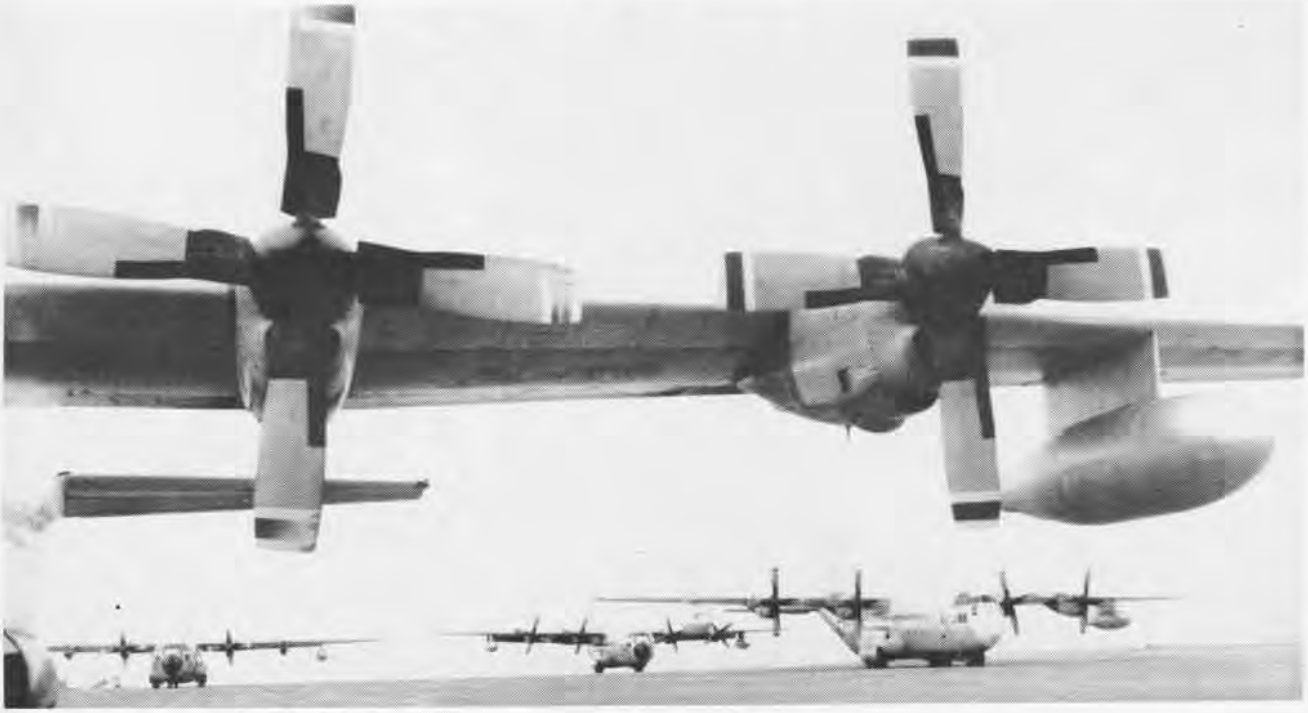
MN-10130E (unclassified) *The Naval Aircraft Maintenance Program—Radiography as a Maintenance Tool.* How radiography is used to discover damaged aircraft parts without dismantling the aircraft for usual inspection—nine minutes.

MN-10147 (secret) *ECM Set AN/ALQ-55 (U).* Introduces the set, explains the theory of operation and use of controls, and demonstrates its effectiveness in protecting naval aircraft during intrusion into enemy-held territory (U)—15 minutes.

Instructions for obtaining prints of newly released films are contained in OpNav Instruction 1551.1D.

FACILITY INSIGNIA

MCAF Futema, the Marine Corps air base on Okinawa, is a busy place these days as three tenant activities provide troop and cargo services to Southeast Asia and the Western Pacific. MATCU-66, VMGR-152 and HMM-161 fly C-45's, KC-130's and UH-34D's from the facility's 9,000-foot runway. Colonel R. B. Laing, Sr., is the C.O.



NAVAL AVIATION
NEWS

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