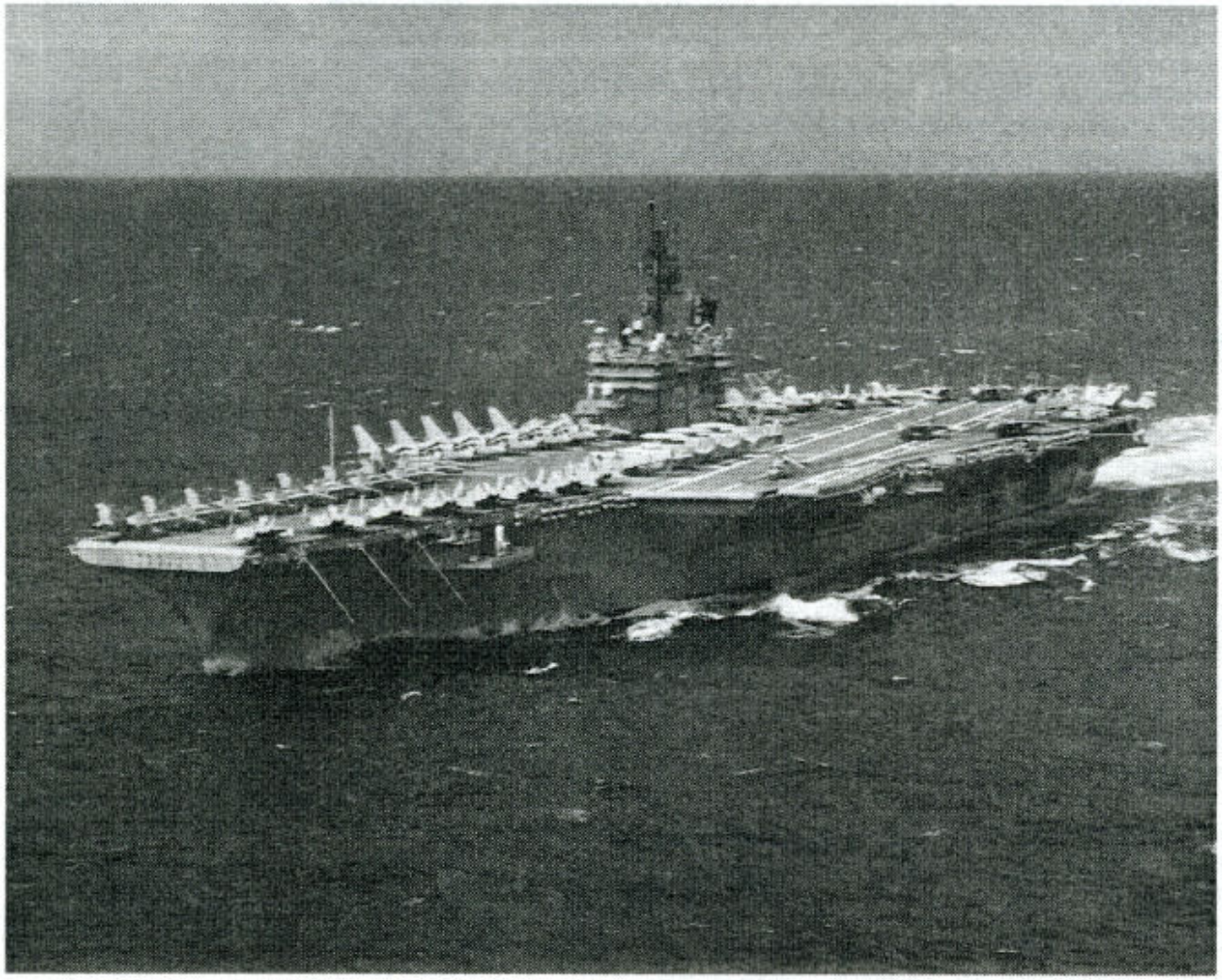
Welcome Aboard!

USS CONSTELLATION (CV 64)



"America's Flagship"

CAPT Donald K. Bullard

Commanding Officer
USS Constellation (CV 64)

Captain Bullard is a native of Santa Paula, California. He received his Bachelor of Science Degree from the University of Southern California and was commissioned through the Navy's Reserve Officer Training Corps Program in June 1973. After initial assignment to Attack Squadron One Two Seven (VA 127) as a Maintenance Division Officer, Captain Bullard reported to flight training and was designated a Naval Aviator in March 1975.

Captain Bullard's operational sea tour assignments, flying the A-7E Corsair, include Western Pacific deployments with Attack Squadron One One Three (VA 113) on board USS RANGER (CV 61) and Attack Squadron One Nine Five (VA 195) on board USS KITTY HAWK (CV 63). He served as Carrier Air Wing Fourteen's (CVW 14) Staff Landing Signal Officer and Staff Strike Operations Officer during Western Pacific and Indian Ocean deployments on board USS CORAL SEA (CV 43). Captain Bullard served his department head tour as Maintenance Officer and Operations Officer with Attack Squadron Two Seven (VA 27) where he made Western Pacific/Indian Ocean deployments on board USS CARL VINSON (CVN 70).

Captain Bullard's shore tour assignments include serving as the Phase Landing Signal Officer and Flight Instructor with Attack Squadron One Two Two (VA 122). He has served on the Staff of Commander, Naval Air Force, U.S. Pacific Fleet on two occasions, first as Force Landing Signal Officer and subsequently as Special Assistant Force Readiness Officer. Captain Bullard has also served as the Training Device Coordinator and Tactical Air Training Officer on the Staff of the Deputy Chief of Naval Operations (Air Warfare).

In January 1990, Captain Bullard reported to Strike Fighter Squadron Nine Seven (VFA 97) as Executive Officer, leading the squadron through transition to the F/A 18 Hornet as Commanding Officer. During his tour, the squadron made deployments on board USS CARL VINSON (CVN 70) and USS KITTY HAWK (CV 63). Under his command, the squadron achieved distinction by award of the Battle Efficiency "E", the Chief of Naval Operations Safety "S", and the Vice Admiral McCluskey Award for "best attack squadron in the U. S. Navy".

In July 1995, Captain Bullard assumed command of USS NEW ORLEANS (LPH 11) while on deployment in the East China Sea. It was during this deployment that NEW ORLEANS made their historic port call to the country of Jordan, the first visit in more than a decade by a U. S. Navy warship. During his command, NEW ORLEANS achieved distinction by award of the Battle Efficiency "E", the Chief of Naval Operations Safety "S", and the Admiral Flatley Aviation Award.

Captain Bullard received his Masters Degree with highest distinction from the Naval War College and is a graduate of the Armed Forces Staff College. He is also a graduate of the Syracuse University Maxwell School National Security Studies Program and has served on the Staff of the Center for Naval Warfare Studies as a Senior Research Fellow.

Captain Bullard has logged over 4000 hours in various aircraft with over 950 carrier landings to his credit. His personal awards include the Legion of Merit, the Meritorious Service Medal (3 awards), the Navy and Marine Corps Commendation Medal, the Navy and Marine Corps Achievement Medal, and various unit and campaign awards.

Captain Bullard is married to the former Katherine Liguori. Captain and Mrs. Bullard reside in Coronado, California, as the proud parents of Kristen, Kimberly, and Nicholas.

USS CONSTELLATION
A Stellar Record

Like her famous namesake, the current USS CONSTELLATION (CV 64) has a long and proud record of service. Built at the New York Naval shipyard as the second ship in the "Kitty Hawk" class of aircraft carriers, USS CONSTELLATION has more than 30 years of service, which have seen it sail into harm's way from Yankee Station off the coast of Vietnam to the Gulf of Oman in the Indian Ocean.

Commissioned October 27, 1961, USS CONSTELLATION sailed west to its homeport of San Diego, California in July of 1962.

On August 4, 1964, the American destroyers MADDOX and TURNER JOY were attacked by North Vietnamese patrol boats in the international waters of the Gulf of Tonkin. USS CONSTELLATION, visiting Hong Kong on a regularly scheduled port visit, set sail immediately and began launching strikes against North Vietnamese vessels and bases.

For the next eight years, USS CONSTELLATION would return to the South China Sea for a total of seven combat cruises, conducting air strikes against heavily fortified North Vietnamese positions, engaging naval targets and shooting down enemy aircraft.

The first American aces of the war, Lt. Randall Cunningham and Lt.j.g. Willie Driscoll of Fighter Attack Squadron 96, flew off USS CONSTELLATION's decks. Their success came during the ship's seventh WESTPAC, its sixth combat cruise. For its actions in Southeast Asia, USS CONSTELLATION was awarded the Presidential Unit Citation.

In 1975, Connie was redesignated "CV" from "CVA" following modifications to the flight deck and equipment which enabled the ship to deploy with S-3A *Viking* (anti-submarine) and F-14 *Tomcat* (fighter) aircraft.

In 1982, USS CONSTELLATION returned to the yards, this time in Bremerton, Wash. Naval aviation had undergone vast changes since 1961, and when the ship came out of the yards in 1984, two weeks early and under budget, it was fully modernized. One facet of the ship's upgrade was the ability to carry the Navy's newest strike fighter, the F/A-18 *Hornet*.

During WESTPAC '87, USS CONSTELLATION once again found itself in the spotlight, this time in the role of providing vital air cover for the escort of U.S.-flagged tankers through the Persian Gulf.

In February 1990, USS CONSTELLATION departed San Diego, returning to the East Coast for a three-year overhaul. The $800-million Service Life Extension Program (SLEP), completed in the Philadelphia Naval Shipyard in March 1993, added an estimated 15 years to the carrier's operational life. The overhaul saw upgrades to virtually every system on the ship, from the galleys to the engine rooms, and the flight deck to the anchors.

USS CONSTELLATION returned to San Diego on July 22, 1993, following its third transit around Cape Horn at the tip of South America.

After the most comprehensive and condensed pre-deployment workups in aircraft carrier history, USS CONSTELLATION sailed from San Diego in April 1997 on its 18th overseas deployment to the Western Pacific, Indian Ocean and Persian Gulf.

From her birthplace at the New York Naval Shipyard to her homeport of San Diego, from the troubled waters of the Gulf of Tonkin to the North Arabian Sea, USS CONSTELLATION has written a stellar record.

"Let friend and foe alike know that America has the muscle to back up its words. Ships like this and you are that muscle."

President Ronald Reagan,
to the crew of USS CONSTELLATION
August 20, 1981

The Ship's Departments

An aircraft carrier is really a floating city. To run CONSTELLATION efficiently, the ship requires an infrastructure similar to a city. The duties of the Commanding Officer (CO) are similar to those of a mayor. He is ultimately responsible for the welfare of the ship and its crew, and establishes guidelines under which the ship operates. Next comes the Executive Officer (XO), who is similar in many respects to a city manager. The XO ensures the CO's guidelines are implemented and the daily functions on board the ship run smoothly. The ship is further divided into 18 departments, each with a specific area of responsibility and expertise. Working together, these departments provide the range of services required to support CONSTELLATION's crew of more than 5,000.

AIMD
The Aircraft Intermediate Maintenance Department, or AIMD, provides intermediate level maintenance support for embarked aircraft. This includes maintenance beyond the normal level of routine maintenance performed by the squadrons themselves and can include almost any type of repair. AIMD has a jet engine shop, electronics repair facilities and the ability to repair and fabricate airframe and structural components.

AIR
Air Department is perhaps the most visible department. It includes all the Sailors who work on the flight deck and associated equipment. This includes the catapults, arresting gear, crash and salvage team, optical landing system, aircraft refuelling crews, primary flight control (the tower) and aircraft handlers on the flight deck and in hangar bays.

CHAPLAIN
Attending to the spiritual needs of the crew and air wing is the job of the Chaplain's Department. Three chaplains perform religious services, and Religious Programs Specialists assist all faiths in coordinating worship services and other activities. The department also runs one of the largest libraries afloat for thee reading enjoyment of the crew.

COMBATSYSTEMS
Expert operations and maintenance of the ship's Command Control, Computers and Intelligence (C4I) suites are the mainstay of thee Combat Systems Department. Providing the eyes and ears of the battle group, Combat Systems personnel are responsible for over 5,000 pieces of radar, satellite communications and computer equipment.

DECK
Deck Department is home of the "traditional" seamanship skills. Deck Department operates the ship's small craft, mooring lines, anchors and the refueling and underway replenishment rigs for taking on supplies at sea. Deck Department Seamen also "drive" the ship, standing watch as helmsmen on the bridge.

DENTAL
The crew's dental needs are attended to by five dentists and a staff of dental technicians. An oral surgeon and prosthodontist make Constellation almost entirely self-sufficient for the crew's dental health needs.

ENGINEERING
The Engineering Department operates all machinery that provide for the ship's propulsion. This includes eight boilers that generate steam for the four main engines and aircraft catapults. The Engineering Department also provides for all the ship's services, including electricity, steam, fresh water, telephones, fire fighting water and sewage. In addition, the Engineering Department provides valuable machine shop services, from sheet metal fabrication to a casting foundry, to fine mill and machine work. The Engineers also organize and form the core of the ship's "fire department," or damage control organization.

EXECUTIVE
Coordinating the ship's personnel and administration are the primary functions of the Executive Department. The ship's Personnel Office coordinates the placement of more than 2,800 personnel and the administration and custody of all enlisted personnel records. The Captain's Office coordinates and implements Navy and CONSTELLATION policies. The

Executive Department also oversees a full-service Print Shop, the Public Affairs Office, career management programs, and special programs, including Equal Opportunity, Substance Abuse prevention, including equal Opportunity, Substance abuse prevention and counseling and Assistance-Programs.

LEGAL
Two legal offices and a staff of legal assistants provide legal support to the ship, air wing, command staffs and ships in company. Legal also oversees the ship's security Division.

MAINTENANCE
The Maintenance Department coordinates all shipboard preventive maintenance, periodic maintenance and major repairs, both in port and underway. The Maintenance Department ensures the ship maintains its peak material condition to ensure it's combat ready at all times.

MARINEDETACHMENT
The Marine Detachment performs physical security missions, ceremonial duties and support for a variety of special missions. These missions include search and seizure of vessels, recovery of aircraft and crew, and non-combatant evacuation.

MEDICAL
Providing medical services to over 5,000 Sailors, the Medical Department consists of a fully-staffed medical facility with most of the services found in hospitals. The ward can accommodate 52 patients, and the ship's doctors, corpsmen and nurses provide routine and emergency medical support both on the ship and throughout the battle group (via helicopter).

NAVIGATION
Tracking the ship's position is critical for both safety of the ship and for the air wing -- naval aircraft generally rely on the ship to provide reference information for tactical strikes. The Navigator and ship's quartermasters use visual, celestial, inertial, electronic and satellite navigation systems to know precisely where the ship is at all times, in all weather conditions.

OPERATIONS
Often referred to as the "nerve center" of the ship, CONSTELLATION's Combat Direction Center controls the employment of all the ship's weapons systems, in addition to this highly visible part of the Operations Department, Air Operations, Carrier Air Traffic Control center (CATCC), Strike Operations, Meteorology and Oceanography, and the Carrier Intelligence Center (CVIC) all provide critical planning, control, analysis and coordination functions to ensure mission success.

SAFETY
One of the smallest but most vital departments on the ship, the Safety Department provides information, training and procedures to ensure the safe operation of the ship. The Safety Officer, the Industrial Hygienist and a group of trained senior Petty Officers coordinate safety training throughout the ship via a network of Safety Petty Officers from each division.

SUPPLY
The Supply Department ensures the sustained operation of the CONSTELLATION through a responsive logistic support system for both the ship and air wing. In addition, the Supply Department prepares and serves 18,00 meals per day, does the ship's laundry, operates the ship's three stores, the Post Office, the ship's payroll and the Morale, Welfare and Recreation program.

TRAINING
Training is a top priority on CONSTELLATION, because of the vast amount of hi-tech equipment and complex systems on board. The Training Department's job is to ensure the ship's crew is well-trained and always ready. The Training Department indoctrinates all new personnel, schedules required schools, tracks all training exercises, and coordinates professional and personal education and advancement for the crew.

WEAPONS
Weapons Department provides the ship and air wing with all training and operational munitions. They requisition, receive, stow, inventory, break out, assemble and transport all ammunition. This includes bombs, mines, cartridges, bullets, missiles, grenades, and demolition charges. They also stand land mine watches and man the ship's small arms mounts.

CARRIER AIR WING TWO (CVW-2)

CVW-2's current composition of nearly 80 aircraft is the prototype of the air wing of the future. Every squadron assigned to CVW-2 flys the newest and most capable carrier aircraft that exist in the Navy today! CVW-2 is currently assigned to USS Constellation.

CAPTAIN RANDOLPH S. DEARTH
Commander, Carrier Air Wing TWO

Captain Randolph S. Dearth was born in Bethesda, Maryland, in November 1952. Graduating from the University of Utah in June 1975 with bachelors degrees in Management and Economics, he was commissioned as Ensign through the Naval Reserve Officer Training Corps.

Following flight training and designation as a Naval Flight Officer in September 1976, Captain Dearth reported to Attack Squadron 128 at Naval Air Station Whidbey Island for Replacement Bombardier/Navigator training in the A-6 Intruder. He joined Attack Squadron 145 in July 1977 and deployed to the Western Pacific aboard USS RANGER (CV 61).

Captain Dearth was assigned to Attack Squadron 128 as an Instructor in March 1980. He returned to sea in January 1983 as the Strike Operations/Assistant Air Operations Officer on the staff of Commander Battle Force Sixth Fleet homeported in Naples, Italy. While in the Mediterranean, he served aboard USS NIMITZ (CVN 68), USS DWIGHT D. EISENHOWER (CVN 69), USS INDEPENDENCE (CV 62), USS JOHN F. KENNEDY (CV 67), and USS SARATOGA (CV 60).

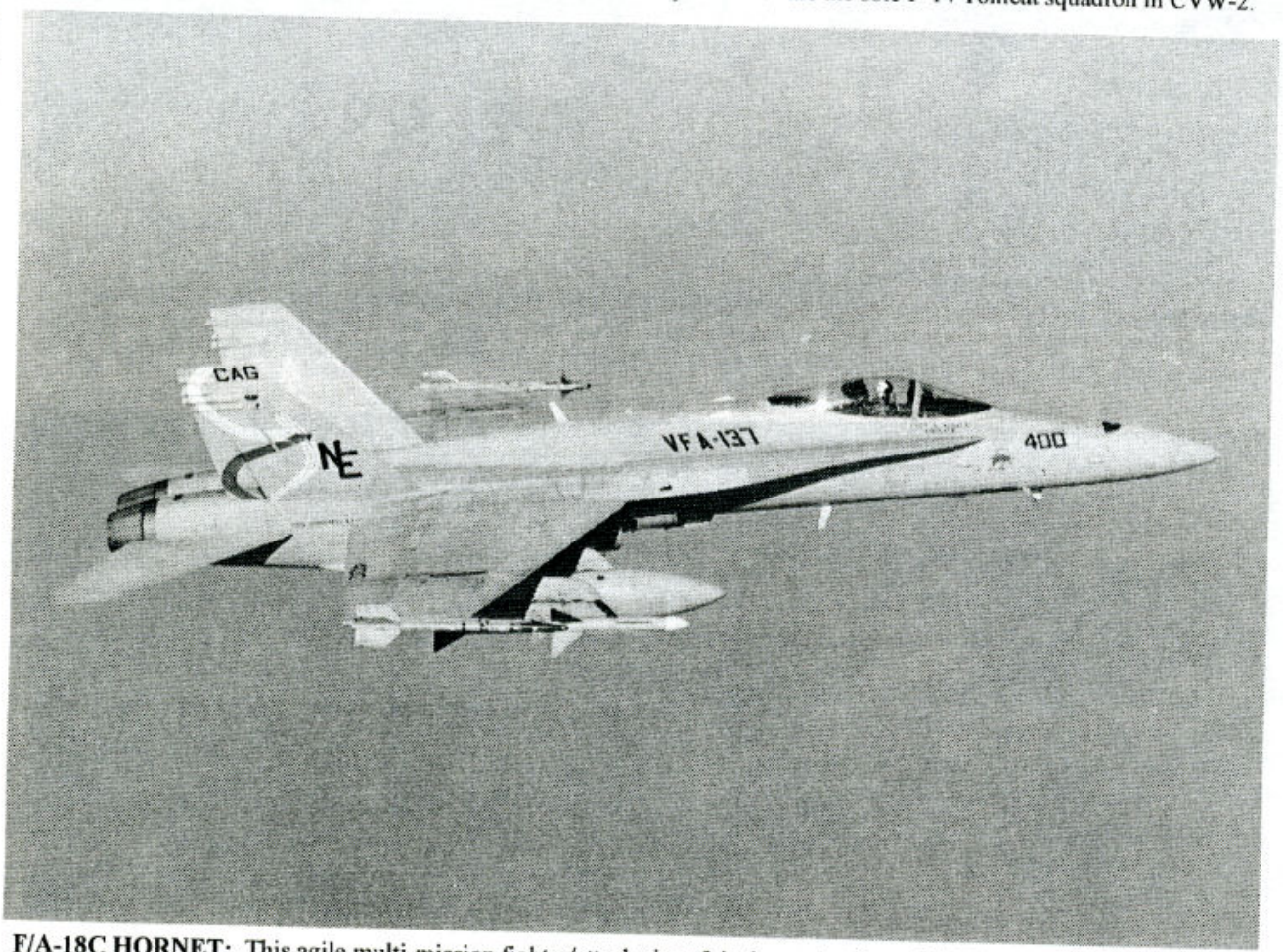
In March 1985, Captain Dearth reported to Air Test and Evaluation Squadron FIVE (VX 5) at the Naval Weapons Center, China Lake, California, as the Electronic Warfare Branch Head. He was the Operational Test Director of the ALR-67, ALQ-126B, ALQ-165 and numerous expendable tactical electronic warfare systems.

Following refresher training at Attack Squadron 128, Captain Dearth reported to Attack Squadron 196 in August 1987. There he served as Maintenance, Administrative and Safety Officer during two deployments to the Western and Northern Pacific and Indian oceans aboard USS CONSTELLATION (CV 64). He then reported to the "Green Lizards" of Attack Squadron 95 as the Executive Officer. Assuming command on September 6, 1991, Captain Dearth led the "GREEN LIZARDS" through the remainder of a Persian Gulf, Western Pacific deployment on board USS ABRAHAM LINCOLN (CVN 72) and the subsequent turnaround training program. During this tour, VA-95 won the 1992 Hughes Trophy for tactical excellence among West Coast Intruder squadrons and the 1992 CNO Safety "S." Captain Dearth's next assignment was as Special Programs Coordinator for the Director, Test and Evaluation and Technology Requirements, Office of the Chief of Naval Operations. Captain Dearth assumed command of the A-6 Fleet Replacement Squadron, the "GOLDEN INTRUDERS" of Attack Squadron 128 in June 1994. The squadron was subsequently selected as the 1994 Intruder Maintenance Squadron of the Year and awarded the Navy Unit Commendation.

Captain Dearth reported as Deputy Commander, Carrier Air Wing TWO in October 1995.

Captain Dearth has accumulated over 3,500 flight hours and 600 carrier landings. His awards include the Meritorious Service Medal (two awards), Navy Commendation Medal, Navy Achievement Medal (two awards) and various unit and campaign awards. Captain Dearth is married to the former Carol Pribble of Sunset, Utah. They have two sons, Jim and Ryan.

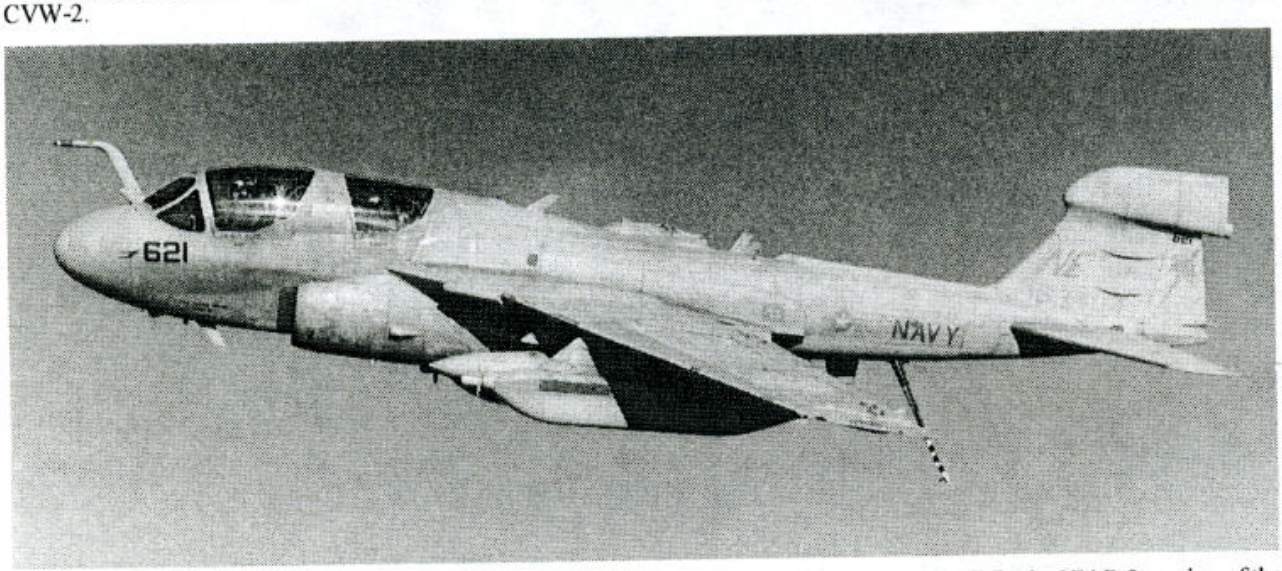
F-14D SUPER TOMCAT: A two-seat, long-range, supersonic interceptor with attack capability. Outfitted with new engines, the F-14D enjoys increased fuel efficiency and unrestricted throttle handling throughout it's flight envelope, including catapult launches without the use of afterburners. Improved radar and enhanced missile capability give the star of "TOP GUN" a decisive edge in the air-to-air arena. The VF-2 "Bounty Hunters" are the sole F-14 Tomcat squadron in CVW-2.



F/A-18C HORNET: This agile multi-mission fighter/attack aircraft is the centerpiece of CVW-2's potent striking power. Flying the single-seat Hornet, the VFA-137 "Kestrels," VFA-151 "Vigilantes" and VMFA-323 (USMC) "Death Rattlers" offer the premier power projection arm to the battle group commander. Capable of delivering precision weapons day or night, the F/A-18C has the state-of-the-art air-to-air/air-to-ground weapons suite.

E-2C+ HAWKEYE: The "eyes" of CVW-2, this airborne early warning command and control aircraft keeps the big picture for the battle group. The VAW-116 "Sun Kings" fly the updated version of the Hawkeye. This E-2C+, with a crew of five, operates at longer ranges, can track over 2000 targets, has improved jamming resistance and fully-automated/optimized overland detection. State-of-the-art avionics and upgraded engines make this "mini-AWACS" an indispensable command and control platform.

S-3B VIKING: A four-seat extended-range force multiplier, this aircraft is the "long pole in the tent" for CVW-2. While incorporating an improved anti-submarine weapons system, this upgraded Viking has evolved into a platform relied upon to perform multiple missions. Equipped with an imaging radar, improved avionics, the Harpoon missile, and an in-flight refueling system, the S-3B provides unique offensive punch and support to the battle group. The VS-38 "Red Griffins" fly in CVW-2.



EA-6B PROWLER: A four-seat electronic countermeasures aircraft, the VAQ-131 "Lancers" fly the ICAP-2 version of the Prowler. An improved jamming capacity, expanded communications system, enhanced signal processing and the HARM missile make the EA-6B *the* platform of choice for suppression of enemy air defense systems and protection of CVW-2 strike aircraft as they put ordnance on target and safely egress.

C-2A GREYHOUND: The C-2A Greyhound is the "Carrier On board Delivery" (COD) aircraft. The C-2A provides a means to transport spare parts, mail and people to and from the ship. A two-plane detachment from the VRC-30 "Providers" flies in CVW-2.

ES-3A SHADOW: CVW-2 incorporates a two-plane detachment of ES-3A electronic reconnaissance aircraft. This variant of the S-3A provides the battle group its own sonsor suite to scout and exploit the electronic emissions of adversary forces at extended ranges. While retaining airframe commonality with the S-3A, the ES-3A has entirely new avionics and signal processing capabilities. The VQ-5 Det Delta "Sea Shadows" fly in CVW-2.

SH-60F/HH-60H SEAHAWK: The air wing doesn't fly without this aircraft first being airborne. Incorporating an integrated anti-submarine mission avionics system with a dipping sonar, a crew of four provides inner-zone protection for the carrier as well as primary Sea Air Rescue (SAR) responsibility. Other primary mission areas include strike rescue and special warfare support. The HS-2 "World Famous Golden Falcons" complete the total combat package for the air wing.

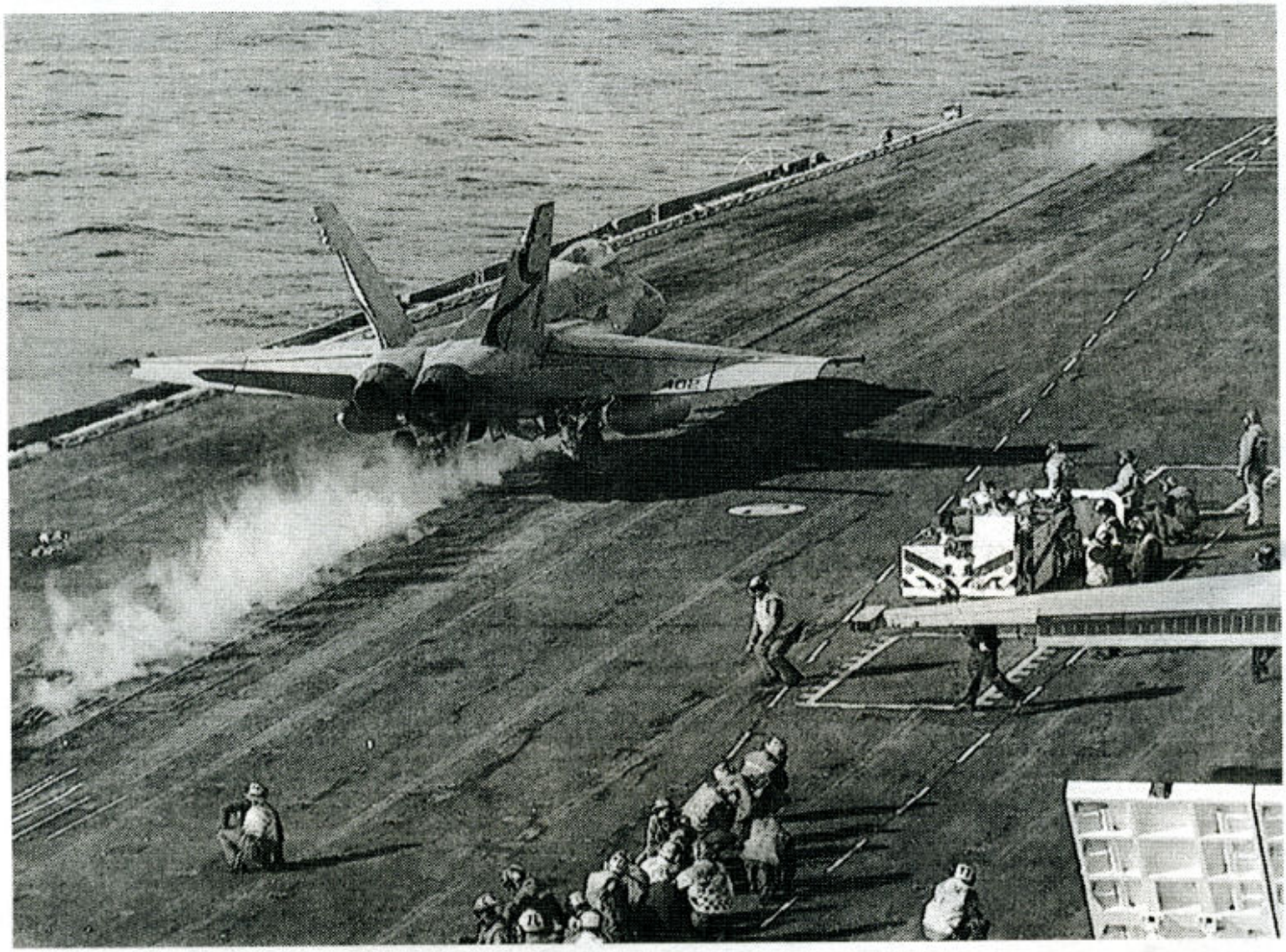
Aircraft Launch and Recovery

THE FLIGHT DECK IN ACTION

CATAPULTS

CONSTELLATION is equipped with four steam catapults which are capable of propelling the heaviest carrier aircraft from the flight deck at speeds in excess of 170 miles per hour. These speeds are reached from a standing start in less than two seconds during the 310-foot catapult launch stroke. An equivalent land-based take-off run would require nearly 6,000 feet of runway.

It is possible, using four catapults, to launch aircraft at the rate of one every 30-45 seconds. CONSTELLATION has successfully launched over 300,000 aircraft since commissioning.



THE LAUNCH, OR "CAT SHOT"

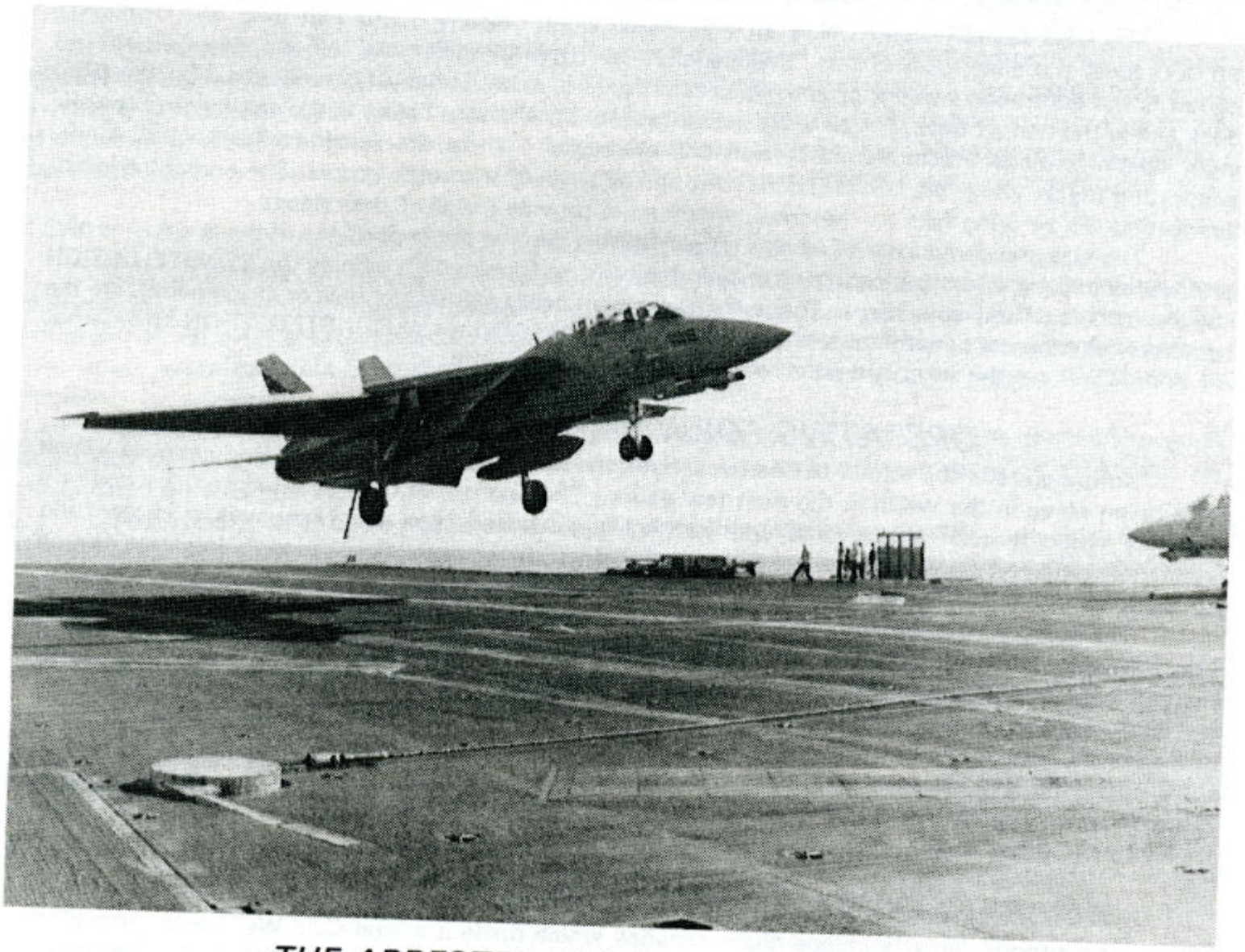
To launch aircraft, CONSTELLATION has four steam catapults. Two are located in the bow, and two are located in the center of the ship on the port side, called the waist.

The catapults are about 300 feet long and consist of a large piston underneath the deck. Above the deck, only a small device engages the aircraft nose gear.

When the planes are ready for takeoff, the aircraft handlers on the flight deck guide the plane onto the catapult and hook up the catapult to the plane's nose gear. After a final check, the pilot increases the aircraft engines to full power. When the engines are steady at full power, steam is admitted to the catapult, which accelerates the plane from 0 to 160 knots in under two seconds. The piston is stopped at the end of the catapult by a water brake and then returns to its original position to launch another plane.

ARRESTING GEAR

Five arresting gear engines are used to "trap" returning aircraft. Four of these engines are normally on line with the fifth engine held in reserve for emergency barricade landings. The aircraft's tailhook engages a cross-deck pendant, which is attached to a cable woven around the arresting gear engine. Aircraft landing at speeds up to 160 miles per hour are brought to a halt in about 300 feet after engaging the cross-deck pendant.



THE ARRESTED RECOVERY, OR "TRAP"

Aircraft are recovered on board in a process known as an arrested landing. The design of naval aircraft starts with the airframe and landing gear, as they must withstand a tremendous shock each time the aircraft launches or lands.

The goal of a landing is for the pilot to have the aircraft's tailhook engage one of four arresting wires stretched across the deck. These wires are about 40 feet apart, two inches off the deck, and are connected to the arresting engines, large hydraulic-mechanical devices which spool out tensioned wire and absorb the momentum of the aircraft.

To land, the pilot uses the carrier's optical landing system, called the Fresnel lens, also known as "the ball." This system emits a beam of light, which tells the pilot if the aircraft's approach is high or low. By following the glide slope established by "the ball," the pilot can place the tailhook of the aircraft so it catches the desired wire (usually the third wire, counted from the stern).

While approaching, the speed of the aircraft is kept slightly above stall speed. When the aircraft hits the deck, the pilot immediately applies full power, in case the plane "bolters," or fails to catch a wire. This way, the aircraft has enough power to get safely airborne for another attempt.

Aircraft Carriers

ENDURING ASSETS FOR A MARITIME NATION

The USS CONSTELLATION is an impressive sight. Nearly 1100 feet long and displacing 88,000 tons, the sheer size of this "floating city" is staggering. But the real marvel of an aircraft carrier is the enormous amount of activity concentrated in such a relatively small area. On the flight deck and in the hangar bays, the air wing operates up to 90 aircraft. Below in the engineering spaces, eight boilers provide steam for propulsion and electricity. There are repair facilities of all kinds, supporting the air wing, the CONSTELLATION, and all ships of the battle group. The enormous job of supporting the air wing falls on the crew, which must provide for all of their needs.

The size and complexity of an aircraft carrier only hints at the importance of these ships as part of America's Navy. No other country has ever deployed as formidable a ship as the CONSTELLATION and the other carriers in our Navy. These ships, far from being merely symbols or monuments, are the backbone of America's maritime force, and the Sailors and Marines of CONSTELLATION and Carrier Air Wing TWO are the front-line guardians of our national security.

OPERATING FORWARD, FROM THE SEA

To understand the role of the carrier today, one must recognize the sweeping changes which have taken place in the world in the past few years. The end of the Cold War marked the end of a relatively static threat. While large and technically advanced, our adversary was a known and predictable quantity. Now, regional hostilities potentially threaten our national security interests around the world.

The Navy's vision of the future is captured in the landmark white paper "Forward...From the Sea." This document outlines the Navy's fundamental shift from preparing for an open-ocean war at sea with the Soviet Navy to focusing on regional threats to U.S. national interests. "Forward...From the Sea" recognizes the ability of the U.S. Navy to control the sea lanes as well as controlling the "littoral zone," the areas from off the coast to as far inland as necessary to establish a safe zone for entry of additional U.S. forces. In this way, the Navy and Marine Corps are an "enabling" force, establishing safe beachheads, ports and airfields, and paving the way for follow-on action by Army, Air Force and allied forces.

AIRCRAFT CARRIERS AND "FORWARD...FROM THE SEA"

The aircraft carrier's unique characteristics which made it a vital Cold War asset -- mobility, flexibility and endurance -- are the same characteristics which make it an ideal platform for the future.

FORWARD DEPLOYED, READY ON ARRIVAL

Aircraft carriers are routinely forward deployed around the world, engaging in joint (U.S. Navy, Marines, Army and Air Force) and combined (with other allied nations) exercises. These exercises hone our own combat skills as well as providing valuable experience in operating with other forces.

While deployed, aircraft carriers operate in international waters providing a reassuring presence to our allies and a warning to potential enemies. This presence can be quickly increased or withdrawn as the situation dictates. Should the situation require it, the aircraft carrier and air wing team are ready on arrival to accomplish whatever mission is given, from unobtrusive surveillance to devastating strikes and anything in between.

Although aircraft carriers are routinely deployed near traditional areas of potential conflict, the aircraft carrier can move quickly to another area of the world should a crisis erupt, and be ready to operate immediately.

POWERFUL, FLEXIBLE FORCES

Aircraft carriers are the single most flexible force in the U.S. arsenal. The traditional carrier air wing, consisting of a mixture of aircraft types, is able to meet virtually any emergent security need. When deployed, the carrier can be counted on to quickly respond to nearly any tasking with its own assets.

The air wing is also an extremely flexible force structure. If the situation requires it, the air wing can be quickly tailored to suit the mission by changing the aircraft mix. This could be as small a change as removing Navy patrol aircraft and adding Navy fighters, or as radical as removing much of the air wing in favor of Marine Corps and Army helicopters. This kind of "adaptive force packaging" has been clearly demonstrated in recent military action and represents the wave of the future.

ENDURANCE

The ability of an aircraft carrier to remain on station in international waters for an indefinite time is unmatched by any other military asset. The reduction of overseas presence by the Army and Air Force places an even greater premium on the Navy's "floating airfields." Large troop movements or long-range aircraft patrols from the U.S. can be both expensive and an unnecessary escalation of conflict.

Endurance is a function of the Navy's logistic support forces. Although the ship carries great quantities of fuel, food and spare parts for sustained, unsupported operations, it must still be replenished on a regular basis.

To resupply, Navy oilers and combat support ships bring boiler and aviation fuel, fresh food and weapons. Critical parts and mail are brought by C-2 cargo planes. In essence, the CONSTELLATION can continue operations almost indefinitely, if necessary, without entering port.

READY TODAY AND TOMORROW

The modern aircraft carrier is a marvel of complexity. However, the single goal of combat readiness is the heart of its mission. Optimized during an evolutionary process, CONSTELLATION is the product of not only skilled shipbuilders, but of great ships and Sailors, who sailed before. The lessons learned in millions of miles of steaming, countless aircraft launches and recoveries, and a myriad of missions in both peace and war have given the Navy and the nation today's reliable and potent weapons system. Our nation's aircraft carriers are truly national assets.

Points of Interest

HANGAR BAY

The primary function of the Hangar Bay is to store and serve as a repair area for the ship's aircraft. Nearly half of the 75 aircraft on board can be kept in the Hangar Bay, with the remainder staged on the Flight Deck. Aircraft are lifted from the Hangar Bay to the Flight Deck by one of the ship's four aircraft elevators, each able to lift 130,000 pounds, or two airplanes.

COMBAT DIRECTION CENTER

The Combat Direction Center (CDC) is the ship's eyes and ears. CONSTELLATION's CDC is one of the most modern in the fleet, with computer-enhanced air detection systems. Four warfare modules in CDC compile specific data and relay it to the Tactical Action Officer (TAO) where it is displayed in real time on large computer screens. The TAO uses this information to assist the Captain in defending the ship against attack and employ the air wing on offensive missions.

FORECASTLE

Both the CONSTELLATION's 30-ton anchors are raised or lowered from the Forecastle (pronounced folk-sull). The anchors are each supported by more than 1,000 feet of anchor chain. Each anchor chain link weighs 365 pounds. In port, more than a dozen six-inch diameter Kevlar ropes are used to tie the CONSTELLATION to the pier.

FLIGHT DECK

The Flight Deck is often described as one of the most dangerous places in the world because of the numerous high-performance aircraft launching and landing in a relatively small, confined area. CONSTELLATION uses its four steam-powered catapults to launch an aircraft at a rate of once every 30-45 seconds. The catapult, in conjunction with the plane's engines, accelerates the aircraft from 0 to 160 knots in less than two seconds. Four 1 1/2-inch diameter steel arresting wires are used to "trap" an incoming aircraft. These wires are about two inches above the deck and when caught in the plane's tailhook, bring the plane to a stop in less than 300 feet.

NAVIGATION BRIDGE

The Navigation Bridge is where the ship's maneuvering commands are issued. At sea, the Captain remains on the Bridge whenever the ship is conducting flight operations or other special evolutions. Assisting the Captain is the Officer of the Deck (OOD), who ensures the safe navigation and operation of the ship. The Conning Officer, or Junior Officer of the Deck (JOOD), works for the OOD. It is his responsibility to maneuver the ship by providing orders to the Helmsman, who steers the ship, and the Lee Helmsman, who communicates speed changes to the engineers via the Engine Order telegraph. The Navigator and his assistants, Quartermasters, use several types of navigational aids, including satellites and the stars, to provide course recommendations to the OOD.

Shipboard Safety

1. ***Stay with your escort at all times and follow his instructions.*** In the event of an emergency, your escort will take you to a safe area. If you happen to get separated from your escort, please stop someone and ask for assistance.

2. ***Watch your step!*** The stairs are very steep, so always use the handrails or chains. There are many ankle-twisters, "knee-knockers" and other trip hazards on the ship.

3. ***Watch your head!*** The overhead clearances in some areas are not very high, and there are many things protruding from it. Be prepared to duck. If you wear a cap, be careful that the brim does not mask your vision from overhead objects.

4. ***Smoking is NOT allowed on board!*** Your escort can tell you where the designated smoking areas are on the pier.

5. ***Do not eat or drink while on board, except in designated areas.*** Your escort can tell you where the designated dining facilities are on board.

6. ***Do not sit or lean on life lines, rails or chains.*** Some may not be able to support your full weight, or the ship's movement could cause you to fall overboard.

7. ***Do not run!*** Aboard the CONSTELLATION, only two groups of people are allowed to run: the ship's Fire Party (the ship's firefighters) and Security Force. If you hear someone yell loudly behind you, please move aside and get out of the way quickly.

8. ***Supervise your children at all times.*** This is a must for their protection, especially for those under the age of eight.

9. ***Medical emergencies.*** In the event that you need medical attention, ask your escort or the nearest crew member for help.

10. ***Off limits.*** All sponsons, catwalks, the fantail and all areas marked restricted, are off limits for your safety. Your escort will guide you on where you are able to go.

11. ***If you don't know what it is, don't touch it!*** If you want to know more about something, please ask. The crew will be more than happy to show you how they do their jobs.

USS CONSTELLATION FACTS & FIGURES

Builder.....New York Naval Shipyard

Keel Laid.....September 14, 1957

Launched.....October 8, 1960

Commissioned.....October 27, 1961

Total Cost.....$400 million (1961 dollars)

Combat Load Displacement.....88,000 tons

Overall Length at Flight Deck.....1,079 feet

Width at Flight Deck.....270 feet

Height Keel to Mast.....17 stories

Area of Flight Deck.....4.1 acres

Speed.....30+ knots

Propulsion System.....Eight Steam Boilers

Main Engines.....Four Steam Turbine Engines

Shaft Horsepower.....280,000

Propellers.....Four, 21'-diameter, 22 tons each

Freshwater Distilling.....400,000 gallons/day

Number of Aircraft Elevators.....Four

Catapults.....Four, steam-driven

Arresting Gear Cables.....Four steel cables

Anchors.....Two (30 tons each)

Compartments and Spaces.....3,000+

Accommodations.....5,500+ people

Telephones.....1,400+

Meals Served Each Day (at sea).....18,000+

Constellation History Highlights

August 1964 - In response to attacks on American destroyers in the Gulf of Tonkin, Constellation launches the first American air strikes against North Vietnam.

Vietnam War - Constellation makes seven combat cruises. On the sixth, Lt. Randall Cunningham and Lt.j.g. Willie Driscoll become the first U.S. aces of the Vietnam War, shooting down five enemy aircraft.

1975 - Redesignated "CV" from "CVA" following modifications to the flight deck and equipment to support the S-3A Viking and F-14 Tomcat.

1987 - Constellation provides air cover for U.S.-flagged tankers in the Persian Gulf.

Feb. 13, 1990 - Constellation departs San Diego for Philadelphia and the Service Life Extension Program, an overehaul designed to add 15 years to the carrier's life.

March 4, 1993 - Constellation departs Philadelphia after completing the $800-million overhaul.

July 22, 1993 - Constellation returns to Naval Air Station North Island San Diego, and prepares to usher in the 21st century.

November 10, 1994 - Constellation departs San Diego on its first overseas deployment in more than five years to the Western Pacific, Indian Ocean and Persian Gulf.

May-August, 1997 - Aircraft from Constellation's air wing, Carrier Air Wing Two, patrol the No-Fly Zone over southern Iraq in support of Operation Southern Watch.

October 1, 1997 - Constellation completes its 18th overseas deployment after operating for more than 10 weeks in the Persian Gulf.