

VFA 115 Plays Integral Role in Operation Iraqi Freedom



Photo courtesy of U.S. Navy

Super Hornet Pilots from the Eagles of VFA-115 return from the F/A-18E's first cruise to their home base NAS Lemoore, Calif.

Lt. Robert Kihm, VFA-115

It was truly a storybook cruise for the "Eagles" of VFA-115. Not only did they take the Navy's F/A-18E Super Hornet on its inaugural deployment, but they had the opportunity to visit six different ports and to participate in three major military operations.

After leaving for WESTPAC back in July 2002, the Eagle's first combat missions were flown over Afghanistan in support of "Operation Enduring Freedom." Next, they entered the Persian Gulf to participate in "Operation Southern Watch," patrolling the skies of Southern Iraq.

After record-breaking performances in those two operations and spending Christmas in Perth, Australia, the Eagles began heading home. But with talk of war dominating the headlines and rumors of going back to Iraq spreading, the decision was made to keep USS *Abraham Lincoln* (CVN 72) forward deployed. Following another

trip to Perth, a detachment to Pearce RAAFB and almost three months of waiting and uncertainty, CVW 14 began flight operations on March 19 in support of "Operation Iraqi Freedom" (OIF).

As the war kicked off, the Eagles were quick to showcase the capabilities of their new aircraft. Among the Super Hornet's many improvements are increased bringback, two extra wing stations and a larger internal fuel capacity. VFA-115 operated their F/A-18Es in a single-centerline configuration which freed up wing stations for more ordnance.

Taking advantage of these attributes, two VFA-115 Super Hornets delivered their first quantity-four JDAM release in support of the "Shock and Awe" campaign. The capability for a single aircraft to deliver 8,000 lbs of ordnance to four targets allows a section of Super Hornets to perform what in the past would take two divisions of aircraft to accomplish. In addition, the extra fuel

the Super Hornet carries allowed for single-cycle Close-Air-Support missions deep into Iraq while maintaining an impressive and flexible 4,000 lb loadout of recoverable ordnance, either JDAM, LGBs, or GP bombs. Furthermore, the Super Hornet's new IDECM suite, including the latest Radar Warning Receiver, extra chaff and flares, towed missile decoys and radar jammers, gave the Eagle pilots extra confidence to

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operate deep into the heart of Iraq's formidable air defense systems.

Ultimately, VFA-115 played an important strike role during the war. The Eagles expended over 350,000 lbs of ordnance during OIF with an incredible ordnance success rate of over 98 percent.

This accomplishment was made possible by VFA-115's outstanding maintenance department, which sustained an extremely impressive combat sortie completion rate while averaging over 55 flight-hours per day throughout the campaign.

An improved strike capability wasn't the only way VFA-115 was able to contribute to the war effort. When it was realized that a limiting factor in the air war would be the

availability of airborne tankers, VFA-115 was immediately called upon to provide organic tanking for the Air Wing. Along with strike sorties, the Eagles began flying 18-20 tanking sorties a day. Since one Super Hornet tanker could provide fuel to two strike aircraft, this tremendous effort by the Eagles (in concert with the "Blue Wolves" of VS-35) allowed for up to an additional 40 strike sorties to be flown by CVW-14 daily. This effort assisted in making the USS *Abraham Lincoln* the most productive carrier of the war. Throughout the conflict, the Eagles passed over 2.3 million lbs of fuel, generating more than 430 extra combat sorties.

Now, after ten months of cruise, CVW-14 and the USS *Lincoln* are home. Wrapping up what is the tenth

longest cruise since WWII, the men and women of VFA-115 now have some time to reflect on what has been an incredible voyage. Flying over 5,400 hours, expending 460,000 lbs of ordnance with a sortie completion rate of 97.5 percent not only shows that the Eagles have successfully integrated the Super Hornet into fleet operations, but they have done so in a truly remarkable fashion.

Participating in three Operations in two theaters, VFA-115 has set new standards of excellence in strike warfare. It is that kind of performance which has earned them an Arleigh Burke Fleet Trophy nomination and continued recognition as one of the finest Strike-Fighter squadrons in the Navy.



A patriotic welcome from family and friends as the Lemoore based F/A-18s headed for home plate after serving in the Middle East during "Operation Iraqi Freedom." Photo by Ron Bookout, Boeing Company

Out and About With The Fleet Celebrating Super Hornet's First Carrier Cruise



Arabian Gulf (March 28, 2003) -- An F/A-18E Super Hornet from the 'Eagles' of Strike Fighter Squadron VFA-115 launches from one of four steam powered catapults on the flight deck of USS *Abraham Lincoln* (CVN 72). Lincoln and her embarked aircraft were deployed in support of Operation Iraqi Freedom U.S. Navy photo by Photographer's Mate 3rd Class Tyler J. Clements.

Arabian Gulf (April 03, 2003) -- Aviation Ordnancemen assigned to the "Eagles" of Strike Fighter Squadron VFA-115 load a GBU-16, 1000 lb. bomb on to a F/A-18E Super Hornet in preparation for daily flight operations on the flight deck aboard USS *Abraham Lincoln* (CVN 72). USS *Lincoln* and Carrier Air Wing Fourteen (CVW-14) were deployed conducting combat missions in support of "Operation Iraqi Freedom." U.S. Navy photo by Photographer's Mate 3rd Class Michael S. Kelly.



Arabian Gulf (March 25, 2003) -- An F/A-18E Super Hornet assigned to the "Eagles" Strike Fighter Squadron VFA-115 configured in the Mission Tanker role clears the flight deck during combat flight operations aboard USS *Abraham Lincoln* (CVN 72). Lincoln and her embarked Carrier Air Wing Fourteen (CVW-14) were conducting combat missions in support of Operation Iraqi Freedom. U.S. Navy photo by Photographer's Mate 3rd Class Philip A. McDaniel.

V10.7 Software Completes Final Flight Tests

Nicolette Cormier

The final flights of the V10.7 software flight test program were flown April 3, 2003 at NAVAIR Patuxent River, Md. The software is designed to improve the recovery from and resistance to the out-of-control flight, and the phenomenon known as the "Falling Leaf" mode.

"This software will be a major benefit to the fleet and should greatly reduce the number of mishaps resulting from Out of Control Flight (OOCF) incidents," said Capt. Jeff Wieringa, F/A-18 Program Manager."

The Falling Leaf is an out-of-control flight mode that exists in the Hornet aircraft. It is typically entered following nose-high, slow speed maneuvering when the aircraft "tailslides" and departs from controlled flight. The aircraft will enter post-departure gyrations (oscillating randomly) that develop into side-to-side oscillations, resembling a falling leaf.

Large rates of descent are seen during these events and the pilot procedure is to release all controls – letting the flight controls recover the aircraft. The V10.7 upgrade implements additional software feedbacks and logic to damp Falling Leaf motion.

"The flight control software was developed to increase the Hornet's departure resistance and recovery characteristics, said Jessica Wilt, NAVAIR Flight Dynamics. "It was in

response to numerous aircraft losses in the past 20 years due to out-of-control flight, particularly the Falling Leaf mode. The upgrade also includes updates to the flight control system redundancy management."

The software testing has been ongoing for several months and is an integrated effort between the Navy and the Boeing Company. Prior to the final flight tests, the developmental software was tested May 2002 through September 2002. By January 2003 the final production version of the software was ready for its first flight test.

Throughout the May 2002 to April 2003 timeframe there were 70 flights using three test aircraft. Eight test loadings were evaluated, including stores, tanks and lateral weight asymmetries. Flight-testing included heart of the envelope testing as well as intentional departures and spins and a look at potential system failure modes. Test statistics include 400 rolls, 48 spins, 64 tail slides and numerous aggravated control inputs.

During these tests all performance objectives were achieved. With all flights completed and test objectives met, the software upgrade will be certified for flight in the current flight envelope of the F/A-18A/B/C/D Hornet.

"The advantages to the fleet are huge. The aircraft is significantly more departure resistant with the new software. It recovers quickly from departure events, prior to developed out-of-control flight modes.

This is combined with enhancements to the roll performance at high angles-of-attack. The Hornet Fleet should see a great improvement to the way the aircraft handles at high angles-of-attack," said Wilt.

Tests completed during the final week were flights for the fleet departure-training program and the consecutive rolls evaluation for the Navy's Blue Angels flight demonstration team. The Blue Angels use partial opposite rudder pedal inputs to counter proverse sideslip that builds up during consecutive rolls. There was some concern that the rudder gains reduction at low airspeed in V10.7 would take away too much rudder authority to coordinate the rolls. Final flight-testing demonstrated, even with the rudder gain reductions in V10.7, very little rudder pedal input is required to coordinate consecutive rolls.

Now that the flight control computer V10.7 upgrade testing is complete the team is busily working on NATOPS changes, fleet training briefs, and associated documentation. Implementation plans are being developed in coordination with the TYCOMS and foreign military customers. All of the data required to provide a flight clearance for V10.7 to the fleet and to the Blue Angels has been collected, along with the data required to modify the fleet departure-training program for use with V10.7. The software is currently scheduled for release early next month.



F/A-18E Super Hornets assigned to the "Tophatters" of VFA-14, operating over the aircraft carrier USS *Nimitz* (CVN 68), are shown flying in a diamond formation. U.S. Navy photo by Photographer's Mate 3rd Class Kristi J. Earl.

EA-18G Program Underway

Nicolette Cormier

When the EA-18G Team received confirmation in December 2002 that the EA-18G would replace the EA-6B for the carrier based Navy, they hit the ground running. The team has grown in recent months to 15 people and is working toward a 2009 Initial Operational Capability (IOC). The EA-18G, a derivative of the two-seat F/A-18F Super Hornet, will perform full spectrum electronic surveillance and attack against enemy threat radars, and communications networks.

"We have built up the core team from PMA265 and PMA234 AEA subsystems folks," said Lisa Nyalko EA-18G Deputy Program Manager. "The team is a good mix of logisticians, engineers, legal, acquisition and contact support personnel. Using all this resident talent we are making sure all the risk items are being tracked between the two PMAs, which has been a great help in pulling the program together."

Once the Under Secretary of Defense, (Acquisition, Technology and Logistics) approved the program to replace the EA-6B, the initial funding became available. The amount was \$5 million earmarked in 2002 by congress for the EA-6B replacement. In Fiscal Year 2003 (FY03) the team received the first funding that was tied to the EA-18G.

"We awarded our first contract on September 30, 2002 for the Pre Systems Development and Demonstration (SDD) phase," said Glenn Wheeler, EA-18G Class Desk Officer. "That's when we made our first commitment. We were working to meet a request that we award the Pre-

SDD contract by the end of the fiscal year, which was difficult considering we didn't get approval to move forward until September 15."

These initial funds allowed the team to lay out a good foundation for the program. Funds awarded April 1 of this year are helping the team to put together the specifications for the statement of work and fine-tune the schedule. They also plan to use the funds to conduct trade studies and some of the critical engineering necessary for establishing the design of the aircraft.

The EA-18G has a high degree of commonality with the Super Hornet and is expected to significantly reduce support and training costs for the U.S. Navy. From an economic standpoint the team is trying to change as little as possible to the airframe structure.

"We have to balance the potential gains from airframe changes against the loss of commonality with the "F" platform," said Nyalko. "The team is running a trade study right now and there are some big items that we are looking at. We will be deciding in the next few months what we will do with the mission computer, the digital recorder, and wiring changes that may affect a fuel tank."

"We have a plan called the Program Systems Engineering Review Board that we are standing up," she said. "It enables us to look at every requirement for the "G" that comes down the pipe to see if that unique requirement would benefit the E/F models, and whether it would make sense to make the investment for the E/F and "G" from a commonality standpoint."

The team's many briefings these days are geared towards achieving

Milestone B in late 2003, which is needed to award the SDD contract. These briefings lay out the acquisition strategy and are designed to gain concurrence and get "buy-in" from the appropriate Navy and Office of Secretary of Defense offices.

The first EA-18G will be a derivative of a Lot 27 Super Hornet scheduled for delivery in 2005. The team has reached an agreement with N78 to take the last two Lot 27 "F" model aircraft, which are AESA equipped, and modify them to serve as EA1 and EA2, the program's initial test aircraft. "Those two aircraft will remain in testing for the remainder of their lives and will never be delivered to the fleet, said Nyalko. "The first fleet delivery will be four Lot 30 aircraft. These aircraft will be delivered for Operational Evaluation purposes, which will begin in 2008."

The team has had a busy year so far and is expecting the pace to accelerate as the Milestone B review approaches. The next important event on the program agenda is getting the acquisition strategy finalized and then getting the final specification and statement of work completed.

"The great thing about the EA-18G is what we've got going for us in terms of personnel," said Nyalko. "We are in a position to tap into both PMA234 and PMA265 that have significant residual knowledge on the systems and technologies of the ICAP III and the F/A-18F. They bring a wealth of experience to the program that will be essential as we move forward in making the EA-18G a reality for the fleet."



PMA265 Leader Nominated for One-Star

F/A-18 Program Office

NAVAIR Program Manager Capt. Jeff Wieringa received happy news recently when he was informed that he was nominated to the rank of rear admiral (lower half). First commissioned in the U. S. Navy as an Ensign in 1976, Wieringa is a long-time resident of the Hornet's Nest.

Having been associated with the F/A-18 Strike Fighter Program (PMA265) for the past decade, Capt. Wieringa has served in a variety of leadership assignments within the Naval Air Systems Command (NAVAIR). He has managed the F/A-18 program for the past three years and prior to this assignment served as the Principal Deputy Program Manager. In addition he held positions as the co-leader for the F/A-18E/F Integrated Program Team and the office of Executive Director for Operations in the Research and Engineering Department within NAVAIR.

Capt. Wieringa was designated as a Naval Aviator in 1977 and went on to complete two cruises each on the USS *Ranger* (CV 61) and the USS *Kitty Hawk* (CV 63) as an A-6 Intruder pilot.



Capt. Jeffrey A. Wieringa

He has since flown 40 different types of aircraft, accumulating over 4000 flight hours and 534 carrier landings. He is a graduate of U.S Navy Test Pilot School class of 1993.

The PMA265 Change of Command is scheduled for May 30, 2003. Currently at press time he is awaiting orders. The Hornet Buzz joins a long list of well-wishers in sending congratulations.



Photo courtesy of U.S. Navy

Capt. Jeff Wieringa gives the thumbs up as he prepares for a flight in an F/A-18F at NAVAIR China Lake, Calif.

