

# Valiant Returns Home Following Counterdrug Patrol

JACKSONVILLE, Fla. – The crew of Coast Guard Cutter Valiant returned home Oct. 3 to Naval Station Mayport following a six-week counterdrug patrol in the Caribbean Sea, the 7th Coast Guard District said in an Oct. 3 release.

The Valiant crew patrolled over 7,000 nautical miles in the Caribbean in support of Joint Interagency Task Force South. During their patrol, the crew worked closely with partner nations such as the Netherlands.

After careful preparation and coordination, Valiant joined forces with the HNLMS Friesland, a Royal Netherlands Navy offshore patrol vessel, and the Coast Guard Cutter Richard Dixon to ensure the safe and expeditious transfer of four suspected drug smugglers to U.S. law enforcement officials. The Valiant crew also contributed to an interagency operation, which will support the dismantling of a transnational criminal organization.

A crew from Jacksonville's Coast Guard Helicopter Interdiction Tactical Squadron (HITRON) joined the Valiant crew during their counterdrug patrol. HITRON is America's first airborne law enforcement unit trained and authorized to employ airborne use of force and intercept vessels suspected of transporting illicit narcotics into the United States.

"We had a very successful patrol this summer, ensuring the Caribbean remained a challenging and unwelcome place for drug smugglers to operate, combatting transnational organized crime networks, and keeping drugs off U.S. streets," said Cmdr. Matthew Waldron, Valiant's commanding officer. "My first patrol as commanding officer of Valiant, I couldn't be more proud of this crew. As always, we are excited and ready to

return to our families and friends back in our homeport of Mayport.”

The Valiant is a multimission 210-foot medium-endurance cutter. Missions include search and rescue, maritime law enforcement, marine environmental protection, homeland security, and national defense operations.

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## **Ultra Wins Subcontract as Part of the Underwater Warfare Suite Upgrade Project**

DARTMOUTH, Nova Scotia – Ultra Electronics Maritime Systems (Ultra) has been awarded a significant contract award from General Dynamics Mission Systems–Canada to supply the new in-line transmitter and receiver array as part of General Dynamics’ successful win of the Underwater Warfare Suite Upgrade (UWSU) project for the Royal Canadian Navy, Ultra said in an Oct. 2 release.

Combined with the recently completed Halifax-class modernization program, the UWSU project will enable a step-change in underwater search capability that will see Canada’s Halifax-class frigates well-equipped for antisubmarine warfare (ASW) operations long into the future.

Ultra’s transmitter solution for UWSU is a made-in-Canada solution originally conceived at Defence Research and Development Canada Atlantic Research Laboratory. The solution enables sound energy to be steered only in the direction of interest, and with the transmitter and receiver combined in-line in a single towed array, the requirement for a second

independent tow for the transmitter is eliminated – allowing the single reelable array to be installed on the Halifax class with minimal modification.

The single-tow, in-line transmitter also significantly increases the ship's operational envelope because of the transmitter's ability to operate at full power in shallow waters. Ultra's array solution for UWSU is second-generation technology that has been operationally proven with international customers.

"We are proud that our UWSU passive-active, in-line, reelable sonar brings to Canada an innovative low-frequency active ASW solution that will provide a significant increase in capability for the Royal Canadian Navy," said Bernard Mills, president of Ultra Electronics Maritime Systems.

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## **Navy Awards Northrop Grumman New AARGM Contract**

LOS ANGELES – The U.S. Navy has awarded Northrop Grumman Corp. a \$171 million contract for Lot 7 full-rate production (FRP) of the AGM-88E Advanced Anti-Radiation Guided Missile (AARGM). The contract will deliver advanced capability to U.S. warfighters as well as the Italian Air Force and Royal Australian Air Force to counter the accelerating proliferation of surface-to-air threats.

"The rapid proliferation of today's threats requires the most advanced solution to detect and defeat surface-to-air threats and protect our nation and allies," said Cary Ralston, vice president and general manager, defense electronic systems, Northrop Grumman. "AARGM is an affordable, game-changing

solution and we are proud to provide this capability to the warfighter.”

AARGM is a supersonic, air-launched tactical missile system, upgrading legacy AGM-88 HARM systems with capability to perform destruction of enemy air defense missions. AARGM is the most advanced system for pilots, with in-cockpit, real-time electronic order of battle situational awareness against today’s modern surface-to-air threats. It is able to rapidly engage traditional and non-traditional advanced land- and sea-based air-defense threats, as well as striking, time-sensitive targets.

AARGM is a U.S. Navy and Italian Air Force international cooperative major acquisition program with the U.S. Navy as the executive agent. AARGM is currently deployed and supporting operational requirements for the U.S. Navy and U.S. Marine Corps. The missile is integrated into the weapons systems on the FA-18C/D Hornet, FA-18E/F Super Hornet and EA-18G Growler aircraft.

The Italian Air Force recently completed operational testing of AARGM on its Tornado Electronic Combat and Reconnaissance aircraft. A series of flight tests culminated with direct hits on critical air defense threat targets, confirming the operational effectiveness and suitability of AARGM on the Italian Air Force Tornado and allowing the Italian Air Force to transition AARGM into operational squadrons.

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# **Advanced      Arresting      Gear**

# System Completes Performance Testing for Turboprop Aircraft

SAN DIEGO – General Atomics Electromagnetic Systems (GA-EMS)'s Advanced Arresting Gear (AAG) performance testing has been successfully completed for the C-2A Greyhound, E-2C+ Hawkeye and E-2D Advanced Hawkeye aircraft, the company announced in an Oct. 2 release.

The testing supports the Navy's development of a propeller Aircraft Recovery Bulletin (ARB), which is a prerequisite for arresting propeller aircraft aboard USS Gerald R. Ford (CVN 78). The Navy completed the performance testing of the GA-EMS system on the Runway Arrested Landing Site (RALS) at Joint Base McGuire-Dix-Lakehurst in New Jersey.

"The AAG system is designed to arrest a broader range of aircraft and provide higher reliability and safety margins for the U.S. Navy's Ford-class of aircraft carriers," said Rolf Ziesing, vice president of programs at GA-EMS. "As each aircraft is brought in for testing, AAG continues to perform reliably, arrestment after arrestment. The successful turboprop arrestments at RALS mark another significant milestone that moves the Navy closer to initiating recovery testing for these aircraft aboard CVN 78."

The AAG system has been exercised extensively, with more than 800 total roll-in and fly-in aircraft arrestments successfully performed at RALS. In addition, nearly double the approximately 400 planned at-sea F/A-18 E/F Super Hornet recoveries during sea trials and shakedown have been completed aboard CVN 78. GA-EMS continues to collaborate closely with the Naval Air Systems Command and the shipbuilder to optimize the AAG system and the Electromagnetic Aircraft Launch System

(EMALS), and support upgrades during the CVN 78 Post Shakedown Availability (PSA).

“We continue to stress the system, analyze results, and tune the system to ensure maximum performance,” said Dean Key, senior director of EMALS/AAG programs at GA-EMS. “We are on target to be ready for fleet operations when CVN 78 completes its PSA in 2019. We are pleased with AAG’s performance and remain focused on optimizing the system’s capabilities to meet the daily operations and mission requirements for CVN 78 and the next two Ford-class carriers currently under construction.”

AAG is a turbo-electric system designed for controlled deceleration of aircraft. AAG is installed aboard CVN 78 along with EMALS, which uses electromagnetic technology to launch aircraft from the deck of naval aircraft carriers. Both systems have been successfully tested during at-sea periods aboard CVN 78 and are currently in production for the future John F. Kennedy (CVN 79) and Enterprise (CVN 80) aircraft carriers.

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## **Viasat Releases New Security Capabilities for Global Naval Forces**

HALIFAX, Nova Scotia – Viasat Inc., a global communications company, has made new security capabilities available for U.S. and international Five Eyes (FVEY) naval forces, the company said in an Oct. 2 release.

Viasat introduced its integrated Mobile Dynamic Defense (MDD)

cybersecurity software for use at sea to securely capture and distribute sensitive data to onshore counterparts and defend against rapidly evolving cyber threats during a maritime mission.

MDD is highly valuable for maritime platforms because of its ability to provide the necessary policy enforcement and in-mission configuration flexibility without a connection to a remote management system by using the information assurance “Defense in Depth” model, which weaves together multiple layers of security controls and countermeasures. This model enables the Viasat MDD platform to ensure sensitive information hosted on the end user device (EUD) is continually checked and protected from compromise – even if the EUD is disconnected from the military operations center.

“Hackers are increasingly looking to compromise mobile devices as a way to gain access to classified government and military data,” said Ken Peterman, president, Government Systems, Viasat. “By providing Viasat’s MDD software, naval personnel now have the ability to provision and configure devices as a mission changes – which can help secure highly-sensitive mission information and defend against emerging cyber threats – even at sea.”

MDD software is an integral component of Viasat’s comprehensive cybersecurity platform, which analyzes terabits of data across commercial and government networks on a daily basis to defend against some of the world’s most sophisticated cyber threats. Viasat currently offers secure, high-speed and resilient satellite communications-enabled services via its Hybrid Adaptive Network concept for a range of U.S. and FVEY military operations.

Viasat’s MDD security capabilities are now authorized for purchase by naval and maritime customers in the Five Eyes countries: United States, Canada, the United Kingdom, Australia and New Zealand.

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# New Navy Unit to Replace Special Projects Patrol Squadron

ARLINGTON, Va. – The Navy has established a new unit to sustain a special mission capability in its maritime patrol community with the coming retirement of the P-3 Orion aircraft.

A Sept. 10 internal directive from the Office of the Chief of Naval Operations directed the establishment on that date of Fleet Support Unit One at Naval Air Station Jacksonville, Florida, one of two sites that serve as home bases for the Navy's P-8A Poseidon maritime patrols aircraft.

According to the directive, Fleet Support Unit One "will configure and operate P-8 aircraft to provide a follow-on special mission capability in place of [special] projects patrol squadron (VPU) P-3 aircraft due to sundown in 2019."

The mission of the unit will be to provide "oversight, training, operations, maintenance, and configuration management for the P-8 quick reaction capability aircraft," according to the directive.

Fleet Support Unit One will have an officer in charge rather than a commanding officer, who will report to commander, Patrol Reconnaissance Wing 11, at Jacksonville.

The Navy's sole VPU squadron, VPU-2, operates several specially configured P-3C Orion aircraft from Marine Corps Air Station Kaneohe Bay, Hawaii. The squadron is scheduled for deactivation in fiscal 2019 in concert with the phase-out of



the P-3C from operational active-duty patrol squadrons.

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# **Navy Nuclear Reactor Chief: Industrial Base Healthy, but Sustainment Requires High Energy**

WASHINGTON – The Navy’s nuclear propulsion industrial base is meeting the needs of the Navy, but it requires a lot of attention to sustain it to ensure its availability.

“The [nuclear industrial] base is small,” Adm. James F. Caldwell, director, Navy Nuclear Propulsion Program, said Oct. 2 at the Center for Strategic and International Studies, a Washington think tank. “The base is healthy and capable of supporting our Navy nuclear propulsion needs. It’s sustainable through the program of record but it takes a lot of energy to sustain that.”

Caldwell noted that the nuclear vendors, particularly the principal vendors, share the culture of the Navy nuclear propulsion program.

“What matters the most to the Navy nuclear propulsion program is a stable 30-year shipbuilding plan and a stable budget,” he said. “These are the things that stimulate our commercial vendors to support us. If they know that they’re going to have the business, they will invest their facilities and stay the course with us.”

Caldwell noted that “in the 1990s, when the force structure

went down, it resulted in our major suppliers operating significantly below capacity. We were worried that the demise of the nuclear industrial base would result in the loss of the last critical skills that we needed. Since then we focused on right-sizing the industrial base to sustain the critical skills and facilities that we need, and the optimal words were low-rate production, consolidation and down-sizing as appropriate to sustain the skills that we need.”

He also said that “since the 1970s, the Navy nuclear propulsion program has been the sole source that has been driving [the delivery of] new reactors. We’ve done so through first-tier suppliers who don’t specifically rely on commercial business for their business. We have commissioned some 99 vessels since 1979.

“Today, our industrial base is made up of hundreds of vendors of various sizes, but we’re focused mostly on about 28 principal vendors,” he said. “Many of these have been with us for 40 or 50 years and some going on even 60 years. The portion of Navy work for these vendors ranges from 15 percent to 95 percent, some even a little more; the average is around 60 percent. Many of them are seeking opportunities to grow their business in the commercial sector.”

Caldwell regards the nuclear industrial base in three levels: reactor plant heavy components; flow components such as valves and pumps; and reactor instrumentation.

He said the Navy is down to one vendor for reactor plant heavy components, for which the Navy’s requirements are very stringent.

“In the flow control [components], there’s some degree of competition, but the barriers for entry are high,” he said. “It does take many years to develop vendors to be able to develop the equipment. Probably the most competition is in reactor instrumentation and control. A lot of our vendors have

other government business. In this area we have structured our approach to maintain a level of competition while also preserving some redundancy in the vendor base.”

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## **EMCORE      Awarded      Inertial Navigation Systems      Contract for      Maritime      Systems Application**

ALHAMBRA, Calif. – EMCORE Corp., a provider of advanced mixed-signal optics products that provide the foundation for today’s high-speed communication network infrastructures and leading-edge defense systems, has been awarded a contract valued at over \$4 million to design and manufacture navigational grade Inertial Navigation Systems (INS) for a maritime systems application, the company said in an Oct. 1 release.

This new INS will be based on the EMCORE-Orion series of navigators which incorporate EMCORE’s latest generation fiber-optic gyroscope (FOG) technology. It is designed to be a form, fit and function replacement for legacy LN-100 units used in this application. As part of the contract, EMCORE expects to deliver initial production units that will be used for qualification.

“We are extremely pleased to be selected for this program to develop a navigator for this application,” said David Faulkner, EMCORE’s vice president and general manager of Aerospace & Defense. “EMCORE demonstrated the advantages of its low-risk production FOG technology and recently developed EMCORE-Orion series INS technology, which were key reasons for

being selected for this program.”

“This latest contract award results from the innovative fiber optic gyro and inertial sensing technology being developed by our Navigation Systems group,” said Jeffrey Rittichier, EMCORE’s president and CEO. “The investments we are making in this business segment are enabling us to compete and win significant contracts. We look forward to delivering the highest quality product for this program.”

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## **F-35s Join Forces with British Aircraft Carrier to Make History**

LONDON – The first F-35 Lightning fighter jets have landed on the deck of the United Kingdom’s new aircraft carrier, making history and marking the beginning of more than half-a-century of “Carrier Strike” operations, the U.K. Ministry of Defence in a Sept. 28 release.

Royal Navy Commodore Nathan Gray and Royal Air Force Squadron Leader Andy Edgell were the first pilots to land their F-35s on board the carrier, demonstrating the formidable force HMS Queen Elizabeth and its fleet of jets will be.

The first landings and takeoffs from HMS Queen Elizabeth are the culmination of a national endeavor lasting more than a decade to bring an aircraft carrier back to the U.K.’s arsenal. Able to embark up to 24 of the supersonic jets, the carrier provides the Royal Navy with a capability possessed by few others.

"The largest warship in British history is joining forces with the most advanced fighter jets on the planet. This marks a rebirth of our power to strike decisively from the seas anywhere in the world," said Defence Secretary Gavin Williamson. "The historic first landing on the deck of HMS Queen Elizabeth is a monumental moment in our country's proud military history. It is also a statement of Britain's determination to promote peace and prevent war."

The landings mark the start of more than 500 takeoffs and touch-downs set to take place from the mammoth warship during the next 11 weeks, with the jets being put through their paces in a range of weather conditions.

The return of "Carrier Strike" to the United Kingdom comes eight years after a fighter jet last landed on a British carrier.

"I am quite emotional to be here in HMS Queen Elizabeth seeing the return of fixed-wing aviation, having been the captain of the aircraft carrier which launched the last Harrier at sea nearly eight years ago," said the ship's commanding officer, Capt. Jerry Kyd, who was also the captain of HMS Ark Royal when the last Harrier took off from a carrier. "The regeneration of big-deck carriers able to operate globally, as we are proving here on this deployment, is a major step forward for the United Kingdom's defense and our ability to match the increasing pace of our adversaries. The first touch-downs of these impressive stealth jets shows how the United Kingdom will continue to be world leaders at sea for generations to come."

"The Queen Elizabeth-class carriers have been specifically designed and built to operate the F-35 Lightning, offering an immensely flexible and potent combination to deliver military effect around the world," said Cmdr. Andrew Betton, commander U.K. Carrier Strike Group. "Conducting these trials is a critical and exciting step on this journey and I applaud the

many thousands of civilian and military personnel who have played a part in bringing the strategic ambition to reality.”

While the HMS Queen Elizabeth Class carriers will be able to project British military power across the globe for the next half-century, they can also provide humanitarian relief, deepen defense relationships with key allies and provide critical support to our forces as they are deployed across the world.

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## **Royal Netherlands Navy Successfully Integrates SeeByte’s Neptune into Remus 100**

EDINBURGH, Scotland – The Royal Netherlands Navy (RNLN) has successfully integrated SeeByte’s Neptune into its New Generation Remus 100 fleet, the company announced in a Sept. 28 release.

The vehicles are equipped with SeeByte’s goal-based mission planning and autonomy engine software to expedite and optimize single and multivehicle operations.

“We are privileged to be in a position to continue working with The Royal Netherlands Navy and assist in their goal to achieve security at and from the sea,” said Alastair Cormack, SeeByte’s technical client manager. “With the U.S., U.K. and Canadian navies currently using Neptune software, it is fantastic that the RNLN will now have access to the advanced capabilities we offer.”

Neptune can be used to coordinate fleets of unmanned assets for mine countermeasures missions enabling operators to easily coordinate various assets to search, classify and map, reacquire and identify operations as part of a single mission. By combining all the mission plans and monitoring in a single work station and user interface, teams are able to manage larger fleets of unmanned assets without putting additional strain on the operators.