Defense Department Tests Hypersonic Glide Body

A C-HGB launches from the Pacific Missile Range at Kauai, Hawaii, on March 19 during a flight experiment. U.S. Navy

ARLINGTON, Va. — The Defense Department successfully tested a hypersonic glide body in a flight experiment conducted from the Pacific Missile Range at Kauai, Hawaii, on March 19, the Pentagon said in a release.

The U.S. Navy and U.S. Army jointly executed the launch of a common hypersonic glide body (C-HGB), which flew at hypersonic speed to a designated impact point.

Concurrently, the Missile Defense Agency (MDA) monitored and gathered tracking data from the flight experiment that will inform its ongoing development of systems designed to defend against adversary hypersonic weapons.

Information gathered from this and future experiments will further inform the Pentagon's hypersonic technology development, and this event is a major milestone towards the department's goal of fielding hypersonic warfighting capabilities in the early- to mid-2020s.

"This test builds on the success we had with Flight Experiment 1 in October 2017, in which our C-HGB achieved sustained hypersonic glide at our target distances," said Vice Adm. Johnny R. Wolfe, director of the Navy's Strategic Systems Programs, which is the lead designer for the C-HGB.

"In this test we put additional stresses on the system and it was able to handle them all, due to the phenomenal expertise of our top-notch team of individuals from across government, industry and academia. Today, we validated our design and are now ready to move to the next phase towards fielding a

hypersonic strike capability."

Hypersonic weapons, capable of flying at speeds greater than five times the speed of sound (Mach 5), are highly maneuverable and operate at varying altitudes. This provides the warfighter with an ability to strike targets hundreds and even thousands of miles away, in a matter of minutes, to defeat a wide range of high-value targets. Delivering hypersonic weapons is one of the department's highest technical research and engineering priorities.

"This test was a critical step in rapidly delivering operational hypersonic capabilities to our warfighters in support of the National Defense Strategy," said U.S. Army Lt. Gen. L. Neil Thurgood, director of hypersonics, directed energy, space and rapid acquisition, whose office is leading the Army's Long-Range Hypersonic Weapon program and joint C-HGB production.

"We successfully executed a mission consistent with how we can apply this capability in the future. The joint team did a tremendous job in executing this test, and we will continue to move aggressively to get prototypes to the field."

The C-HGB – when fully fielded – will comprise the weapon's conventional warhead, guidance system, cabling and thermal protection shield. The Navy and Army are working with industry to develop the C-HGB with Navy as the lead designer and Army as the lead for production. Each service will use the C-HGB, while developing individual weapon systems and launchers tailored for launch from sea or land.

"Hypersonic systems deliver transformational warfighting capability," said Mike White, assistant director of hypersonics, OUSD research and engineering (modernization). "The glide body tested today is now ready for transition to Army and Navy weapon system development efforts and is one of several applications of hypersonic technology

underway across the [Defense Department]. These capabilities help ensure that our warfighters will maintain the battlefield dominance necessary to deter, and if necessary, defeat any future adversary."

Additionally, MDA is working with Army and Navy in sharing data that will inform their development of enhanced capabilities for a layered hypersonic defense to support warfighter need and outpace the adversary threat.

Navy's Top Doctor: No Active COVID-19 Transmissions Aboard Ships Yet

The USNS Mercy will deploy to the West Coast to help with the care of patients in some hospitals that don't have COVID-19 so those hospitals can concentrate on treating patients with the virus. U.S. Navy/Mass Communication Specialist 2nd Class Zach Kreitzer

ARLINGTON, Va – The U.S. Navy's top medical officer said that no COVID-19 cases have been detected on board Navy ships at sea.

"Because of those enhanced measures that were undertaken weeks ago, we have not seen active transmission," Rear Adm. Bruce Gillingham, surgeon general of the Navy said, during a March 19 virtual news conference at the Pentagon. "We believe [those ships] are essentially self-quarantined in place as units."

"The small handful of cases that we have had have been in ships that are in port, Gillingham said. "Those individuals

have been immediately identified, isolated and, if requiring treatment, they have been provided appropriate treatment for their condition.”

The admiral affirmed that social distancing is being observed to the maximum extent possible on the ships. Analysis of COVID tests is not yet available on ships; the tests are sent ashore for analysis.

He said that everyone boarding Navy ships is being screened for the virus. As a ship leaves port, it is not allowed to make a port call until it has been at sea for at least 14 days, the incubation period for the virus.

The Military Sealift Command is activating the hospital ships USNS Comfort and USNS Mercy to relieve the burden of acute-care patients in some hospitals of patients without the COVID-19 virus so that the hospitals can concentrate on virus victims. The ships are being prepared for a 1,000-bed mission. The Comfort is being sent to New York City.

Gillingham said that the critical core crew for the USNS Mercy is reporting aboard and is being screened for the virus before being allowed on board. A decision of where to send the Mercy on the U.S. West Coast has not yet been made. The Mercy is scheduled to sail next week.

“We will be very careful in the development of our concept of operation of how to care for a community of patients [on the hospital ships],” Gillingham said. “Screening will be an essential part of that guidance.”

Coast Guard Cutter Diligence Completes Last Patrol Before Homeport Change

WILMINGTON, N.C. – The U.S. Coast Guard Cutter Diligence and crew returned to Wilmington on March 13 following a 39-day patrol in the North Atlantic that included living marine resources enforcement and a three-week training and evaluation period, the Coast Guard 5th District said in a release.

The Diligence, a 210-foot medium-endurance cutter, will change homeports to Pensacola, Florida, this summer.

This patrol began in Mayport, Florida, where the crew took part in the biennial operational readiness and training assessment called Tailored Ship's Training Availability. The crew conducted a total of 109 drills and exercises. The training focused on evaluating the crew's ability to repair shipboard casualties, respond to medical emergencies and proficiency in navigation and seamanship.

They shifted roles from training to enforcement of offshore fishery and vessel safety regulations aboard commercial fishing vessels off the coast of the Carolinas. In this role, the Diligence crew ensured compliance with fisheries management measures, promoted a level playing field for commercial fishermen, helped preserve seafood stock sustainability for future generations and protected the safety of life at sea.

While patrolling off Little River Inlet on the North Carolina coast, Diligence encountered two Northern Atlantic right whales. Right whales are endangered, and there are estimated to be less than 400 remaining. Because of their endangered status, right whale conservation zones with speed

restrictions have been established along the eastern seaboard, and all mariners are required to maintain a distance of at least 500 feet from any such whale.

“It was a great honor to witness such a majestic creature in its natural habitat, especially considering its status as an endangered species,” said Petty Officer 1st Class Daniel Smith, a boatswain’s mate aboard the cutter. “It was also an excellent training opportunity for the crew, as we are always on the lookout for this species. However, few have had the opportunity to see one in person.”

“Diligence performed exceptionally during our biennial operational readiness assessment, which was a testament to the crew’s outstanding preparations, steadfast commitment, and exceptional proficiency,” said Cmdr. Luke Slivinski, the cutter’s commanding officer.

“We closed out our deployment by patrolling off the Coast of North Carolina, following in the footsteps of our namesake, Revenue Cutter Diligence, that patrolled the same waters back in the early to mid-1790s. This patrol marked a fitting end to Diligence’s last patrol while homeported in Wilmington, North Carolina, as we depart later this summer for our new homeport of Pensacola, Florida.”

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112 Congressmen Call for Second Virginia-Class Sub in 2021

The Virginia-class fast-attack submarine USS Washington

returns to Naval Station Norfolk, Virginia, on Feb. 11 after its maiden deployment. U.S. Navy/Mass Communication Specialist 2nd Class Alfred A. Coffield

WASHINGTON – The congressional push for reinstatement of a second Virginia-class submarine in the 2021 defense budget has attracted the support of 112 congressmen.

A letter from three congressmen on the Seapower subcommittee of the House Armed Services Committee – sent to the House Appropriations Committee in support of the additional Virginia SSN as well as for the Columbia-class ballistic-missile submarine (SSBN) – was endorsed by an additional list of 109 congressmen.

The letter to Defense Appropriations Chairman Pete Visclosky (D-Ind.) and ranking member Ken Calvert (R-Calif.) was drafted by Rep. Joe Courtney (D-Conn.), the Seapower subcommittee's chairman, Rep. Rob Wittman (R-Va.), ranking member, and another member, Rep. James R. Langevin (D-R.I.). All three represent districts in states that host submarine builders. The 112 signers include 72 Democrats and 40 Republicans.

"The 112 members that have joined this request represent 32 states, over 14,000 suppliers and over $10 billion in manufacturing and support activity in the submarine supply chain," Neil McKiernan, a staffer for Courtney, said in a March 18 release.

During recent hearings, the three drafters were critical of the Navy's budget proposal that limited sub construction starting in fiscal 2021 to one Virginia SSN, together with the long-planned Columbia SSBN.

The objections included the apparent retrogression regarding a 355-ship Navy and attaining a submarine force large enough to support the National Security Strategy, a force level currently set at 66 SSNs. Under current shipbuilding plans and planned retirements, the SSN force level will decline to 42

boats by 2027.

The Navy has put the second Virginia SSN at the top of its 2021 unfunded priorities list. The service and its two sub builders, General Dynamics Electric Boat and Newport News Shipbuilding, succeeded in recent years in reducing the cost of a Virginia SSN to allow the Navy to afford two per year.

The letter notes that then-Chief of Naval Operations John M. Richardson told Congress in 2019 that "with respect to the greatest gap between the warfighting requirement and current inventory, there's no greater need than the attack submarine fleet. … It's a wide gap and it's getting wider. So, every submarine counts against closing that gap."

"The proposal to request one attack submarine is contrary to the National Defense Strategy, the needs of our combatant commanders, and a decade of congressional action in support of a steady two-a-year build rate," the letter said. "Of note, the Navy recently ranked the restoration of the second 2021 Virginia-class submarine as its top unfunded requirement. To that end, we respectfully request your strong support for two Virginia-class submarines in [fiscal] 2021."

Esper Orders Navy to Ready Hospital Ships to Take Pressure Off U.S. Hospitals

The hospital ship USNS Comfort, which is currently undergoing maintenance. U.S. Navy/Mass Communication Specialist 2nd Class Morgan K. Nall

ARLINGTON, Va. — The secretary of defense said March 18 that he has ordered the U.S. Navy to prepare its two hospital ships for activation to take pressure off the nation's hospitals battling the COVID-19 virus pandemic.

At a Pentagon news conference, Secretary Mark T. Esper referred to the two hospital ships — USNS Comfort and USNS Mercy, based at Norfolk, Virginia, and San Diego, respectively — operated by the Military Sealift Command.

"The Comfort is undergoing maintenance and the Mercy is at port," Esper said. "We've already given orders to the Navy a few days ago to lean forward, in terms of getting them ready to deploy."

Esper said the capabilities of the two ships, like military field hospitals, are focused on trauma.

"They don't have necessarily the segregated spaces you need to deal with infectious diseases," he explained. "And so one of the ways by which you could use either field hospitals, the hospital ships or things in between is to take the pressure off of civilian hospitals when it comes to trauma cases [and] open up civilian hospital rooms for infectious diseases."

Esper said that a bigger challenge that activating the hospital ships is staffing the ships with medical professionals.

"All those doctors and nurses either come from our medical treatment facilities or they come from the Reserves, which means civilians," he said. "And, so what we've got to be very conscious of and careful of as we call up these units and use them to support the states, [is] that we aren't robbing Peter to pay Paul, so to speak. So, what I don't want to do is take Reservists from a hospital where they are needed just to put them on a ship to take them somewhere else where they are needed. So, we've got to be very conscious of that. As I've

spoken to a couple governors today, we talked a little bit about that, and I think people are beginning understand what that trade-off means."

NOAA: New Progress on Mapping U.S. Ocean, Coastal, Great Lakes Waters

SILVER SPRING, Md. – The National Oceanic and Atmospheric Administration (NOAA) has released the first annual report on the progress made in mapping U.S. ocean, coastal and Great Lakes waters, the agency said in a release.

Knowledge of the depth, shape and composition of the seafloor is foundational data necessary to explore, sustainably develop, understand, conserve and manage our coastal and offshore natural resources. The 2019 Presidential Memorandum on Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska and the global Seabed 2030 initiative make comprehensive ocean mapping a priority for the coming decade. The Unmapped U.S. Waters report tracks progress toward these important goals.

"The progress made in mapping U.S. waters through 2019 represents the cumulative work of federal and state agencies, nongovernmental organizations, private contracting partners and crowdsourced contributions," said Rear Adm. Shepard Smith, director of NOAA's Office of Coast Survey. "Partnerships and advances in technology are key to making significant progress toward our common goal of completely mapping U.S. waters."

Pulling from an analysis of publicly available bathymetry, the

report presents the percentage of unmapped U.S. waters by region and shows our progress towards filling these basic bathymetry data gaps with each passing year. At the end of 2019, the latest analysis yielded the following results:

Percent of U.S. waters that remain unmapped in 2019:

- U.S. total – 54% of 3,592,000 square nautical miles (snm)
- Atlantic and Gulf of Mexico – 43% of 472,200 snm
- Great Lakes – 95% of 46,600 snm
- Caribbean – 42% of 61,600 snm
- Alaska – 72% of 1,080,200 snm
- Pacific (California, Oregon, Washington) – 24% of 239,700 snm
- Pacific Remote Islands and Hawaii – 50% of 1,691,700 snm

Multibeam and lidar surveys are the two primary sources of bathymetry needed to fill these gaps. In support of the integrated ocean and coastal mapping goal to "map once, use many times," all the data collected in this effort are publicly available to benefit numerous user communities. For the latest status on these efforts and how you can contribute, click here.

Coast Guard Cutter Alert Returns After Counter-Drug Patrol, International

Exercise

U.S. Coast Guard Cutter Alert sails near Puerto Chiapas, Mexico, while participating in a three-day North American Maritime Security Initiative exercise on March 1. U.S. Coast Guard

ASTORIA, Ore. – The Coast Guard Cutter Alert returned home to Astoria on March 15 following a 69-day eastern Pacific Ocean counter-drug deployment, the Coast Guard Pacific Area said in a release. The crew patrolled international waters off the coast of Mexico to disrupt the flow of narcotics and illegal migrants.

Alert's crew also participated in the North American Maritime Security Initiative (NAMSI) Pacific Exercise in and around Puerto Chiapas, Mexico.

NAMSI is a trinational effort by forces of the United States, Canada and Mexico to improve mutual capacity for operational coordination. The three-day exercise focused on enhancing information-sharing and integrating capabilities of Canadian, U.S. and Mexican maritime forces during at-sea counter-drug interdiction operations.

"It was a great experience to participate in and be a part of such a culturally diverse operational exercise," said Petty Officer 2nd Class Cristina Hickey, a Spanish translator and Alert crewmember. "I thoroughly enjoyed conversing in Spanish with my foreign counterparts and learning more about their missions."

Crews from the Coast Guard Air Station Sacramento, Coast Guard Cutter Benjamin Bottoms, Pacific Strike Team, Pacific Tactical Law Enforcement Team, Pacific Area/D11 command center and Joint Interagency Task Force South also participated in the exercise alongside Canadian and Mexican maritime participants.

“I’m proud of the hard work that our crew put into our Eastern Pacific patrol,” said Cdr. Tyson Scofield, Alert’s commanding officer.

“I am especially proud of the professionalism that the crew showed during our joint exercises with the Canadian and Mexican navies. They displayed a high level of skill while demonstrating counter narcotics interdiction techniques and during the shipboard launch and recovering of a Mexican helicopter for the first time. Most importantly, our crew created personal and professional relationships with their North American peers which will help to counter the flow of illegal narcotics into all of our countries.”

USS Delbert D. Black Completes Acceptance Trials

The USS Delbert D. Black maneuvers in the Gulf of Mexico during its bravo trials. Huntington Ingalls Industries’ Ingalls Shipbuilding

Pascagoula, Miss. – The future USS Delbert D. Black (DDG 19) completed acceptance trials on March 12, returning to Huntington Ingalls Industries’ Ingalls Shipbuilding Division after spending two days at sea in the Gulf of Mexico.

During acceptance trials, the ship’s crew performed a series of demonstrations for review by the U.S. Navy’s Board of Inspection and Survey (INSURV). These demonstrations are used to validate the quality of construction and compliance with Navy specifications and requirements prior to delivery of the ship to the Navy.

“The ship performed exceptionally well and demonstrated that the ship is materially ready to execute her mission,” said Capt. Seth Miller, DDG 51 class program manager for PEO-Ships. “The success of these trials validates this highly capable ship will be a force multiplier when she joins the fleet.”

Ima Black signs a photo in 2015 of the future guided-missile destroyer named after her late husband, Master Chief Petty Officer of the Navy Delbert D. Black. The ship is the first Navy vessel to be named after a master chief petty officer of the Navy, and Black was the first MCPON. U.S. Navy/Mass Communication Specialist 1st Class Martin L. Carey

DDG 119 is being constructed with the Aegis Baseline 9 combat system, which incorporates integrated air and missile defense capabilities, such as increased computing power and radar upgrades, that improve detection and reaction against modern air warfare and ballistic-missile defense threats. When operational, DDG 119 and her sister ships will serve as integral assets in global maritime security.

“DDG 119’s exceptional performance during these trials is a direct reflection of the teamwork between Ingalls Shipbuilding and the Navy,” said Capt. Nathan Schneider, supervisor of shipbuilding, conversion and repair Gulf Coast. “I am proud of this ship, and I am extremely proud of the Ingalls Shipbuilding and Navy team that built her. Right behind DDG 119 are follow-on DDGs that will be even better, including the first Flight III DDG which is a real game-changer.”

DDG 119 honors Delbert D. Black, the first master chief petty officer of the Navy, and will be the first naval ship to bear his name. Black is best known for guiding the Navy through the Vietnam War and ensuring proper enlisted leadership Navy-wide by initiating the master chief program.

The future USS Delbert D. Black is expected to be delivered to the Navy later this year. HII’s Pascagoula shipyard also is in production on the future destroyers Frank E. Peterson Jr. (DDG

121), Lenah H. Sutcliffe Higbee (DDG 123) and Jack H. Lucas (DDG 125), the first Flight III ship.

Simple Unmanned Systems Could Impose ISR Tax on Adversaries, Marine General Says

WASHINGTON – One of the ways to counter rivals in the Great Power Competition is to impose costs on a potential adversary. An effective way to do that is with a big, unmanned inflatable boat, according to a top Marine Corps commander.

The Marines are looking to reduce their exposure to increased long-range precision fire with unmanned systems in the air, on land and sea. In addition to accomplishing a mission without exposing troops to danger, unmanned systems are also seen as a way to flood an adversary's decision-making and targeting processes with an array of low signature, affordable and risk-worthy platforms, according to written testimony prepared for a Senate Armed Services Committee hearing March 11.

Asked by Sen. Jeanne Shaheen (D-N.H.) to explain how the Corps is leveraging unmanned systems to upset adversaries' decision-making, Lt. Gen. Eric Smith cited the

Long Range Unmanned
Surface Vessel (LRUSV), a 33-foot long rigid hulled inflatable boat that can
travel far to enemy littorals and unleash a swarm of small aerial drones.

Smith, the deputy commandant for Combat Development and
Integration, said the LRUSV had been tested at the annual Advanced Technology
Exercise last July. The autonomous boat traveled down the Inland Waterway from
Norfolk, Virginia, to Camp Lejeune, North Carolina, about 200 miles, with no
one aboard, controlled from Norfolk. On arrival, the LRUSV launched a swarm of
small, expendable Raytheon Coyote drones that could either attack or observe
the target.

“That’s the kind of capability that we will provide to those forces forward,” Smith said, adding that LRUSV and other lighter, more lethal, resilient capabilities like the Remotely Operated Ground Unit Expeditionary (ROGUE) naval strike missile-firing vehicle, would be transported to overseas exercises in 40-foot long shipping containers.

“That complicates an adversary’s calculus, because if you don’t know what’s in that, it could be weights for a weight room or a lethal strike missile,” Smith said. As the Marines and their weaponry are dispersed in support of distributed maritime operations, “You impose an intelligence, surveillance and reconnaissance tax on an adversary,” he added.

HELIOS Laser Weapon Takes Step Toward Ship Integration

An artist rendering of the capability of the HELIOS system, once it is integrated on an Arleigh Burke-class destroyer. Lockheed Martin

MOORESTOWN, N.J. – Lockheed Martin and the U.S. Navy moved one step closer to integrating a laser weapon system onto an Arleigh Burke-class destroyer after successfully conducting a critical design review (CDR) for the High Energy Laser with Integrated Optical-dazzler and Surveillance (HELIOS) system, the company said in a release.

"Our adversaries are rapidly developing sophisticated weapons, and the threats to the U.S. Navy's fleet are getting more challenging," said Hamid Salim, vice president of advanced product solutions at Lockheed Martin Rotary and Mission Systems. "Our warfighters need this capability and capacity now to effectively counter threats such as unmanned aerial systems and fast-attack vessels."

This year, HELIOS will undergo system integration in Moorestown, New Jersey – the home of Aegis combat system development for 50 years. HELIOS will then be tested at the Wallops Island, Virginia, Navy land-based test site, which will reduce program risk before being delivered to a shipyard for integration into an Arleigh Burke destroyer next year. In addition to being built into a ship's structure, HELIOS will become an integrated component of its Aegis system.

"HELIOS will provide an additional layer of protection for the fleet – deep magazine, low cost per kill, speed of light delivery and precision response. Additional HELIOS systems will accelerate the warfighter learning curve, provide risk reduction for future laser weapon system increments and provide a stronger demand signal to the supply base," said

Brendan Scanlon, the HELIOS program director at Lockheed Martin Rotary and Mission Systems.

Lockheed Martin has more than 40 years of experience developing laser weapon systems. HELIOS leverages technology building blocks from internal research and development projects that continue to advance the Navy’s goal to field laser weapon systems aboard surface ships.