Official: Dahlgren Recently Tested 'Hypercone' Hypersonic Test Projectile



Aerospace engineer Adam Jones said the Navy wants to use Hypercone to gather data to benchmark Naval Surface Warfare Center Dahlgren Division's modeling and simulation capabilities. *LISA NIPP*

NATIONAL HARBOR, Md. – The Navy continues to work on a conical projectile called Hypercone as it tests hypersonic capabilities, an official told attendees at Sea-Air-Space 2022 on April 6.

Adam Jones, aerospace engineer at Naval Surface Warfare Center Dahlgren Division (NSWCDD), said he couldn't provide any details on the Hypercone firing at White Sands Missile Range in the New Mexico desert.

"Our goal is to provide another opportunity to provide

testing," Jones said. "We know that just across the board there are challenges in aero thermal and aero sciences across the board. And we want to use this as a platform to gather the data that we need to help continue to benchmark our modeling and simulation capabilities."

The Navy has not revealed much about the Hypercone effort, part of a larger push for advancing hypersonic technology. In an October 2021 statement, NSWCDD described the purpose of the technology.

"Dahlgren is applying its deep knowledge of advanced gun systems, guided projectiles, and telemetry to support hypersonic research and development," the statement reads. "For example, scientists and engineers are developing advanced guidance and control for future hypersonic systems. NSWCDD recently conducted the first of several planned tests by launching a conical projectile, dubbed Hypercone, to collect aerodynamic and aerothermal data relevant to hypersonic flight conditions.

"Dahlgren also has multiple efforts focused on accurately modeling the flow around a hypersonic vehicle," the statement adds. "Recently, Dahlgren's hypersonic efforts have expanded to include roles in the development of offensive missile boost-glide weapons and other collaborative efforts across the DoD."

Asked whether Hypercone could be turned into an offensive weapon, Jones declined to say.

Textron Offers King Air 260 for Navy's Multi-Engine Training Aircraft



Marine 1st Lt. Matthew Reith performs a preflight inspection of a Navy T-44C Pegasus training aircraft on the flightline at Naval Air Station Corpus Christi, Texas. U.S. MARINE CORPS / 1st Lt. Pawel Puczko

NATIONAL HARBOR, Md. – Textron Aviation is offering a version of its King Air 260 business twin turboprop aircraft to the U.S Navy as a replacement for the service's Beech T-44C training aircraft, a company official said.

Brett Pierson, Textron Aviation Defense's vice president for sales and strategy, told *Seapower* April 6 that the King Air 260 could be modified to meet the requirement for the Multi-Engine Training System (METS), including an aircraft with a high angle-of-attack capability.

Pilots being trained for the E-2 aircraft require such a requirement for training for carrier landings.

The Navy's 2023 budget proposes the procurement of 10 METS, with a total of 58 in a three-year run.

According to a draft request for information posted May 26, 2020, the Navy is looking at existing twin-engine aircraft to replace the service's fleet of 54 T-44Cs used to train Navy, Marine Corps, and Coast Guard pilots to fly aircraft such as the V-22 Osprey, E-2C/D Hawkeye, P-8 Poseidon, P-3 and EP-3 Orion, C-130/KC-130/HC-130 Hercules, E-6 Mercury, C-40 Clipper, HC-27 Spartan and HC-144 Ocean Sentry.

The T-44A, a variant of the Beech King Air 90 business aircraft, first entered service in 1980. The existing T-44As all have been modified to the T-44C configuration.

The Navy said the METS should have an FAA type certification for single- and dual-pilot operations under day and night visual flight rules and under instrument flight rules. It shall cruise at speeds greater or equal to 195 knots and shall be able to operate at a minimum of 20,000 feet above sea level. The aircraft also should have an endurance of 3.5 or more flight hours.

The pressurized aircraft cockpit will have side-by-side seating, as well as a jump seat for an instructor. The cockpit will be equipped with multifunction displays with digital moving map; redundant VHF and UHF radios; an integrated GPS/inertial navigation system; Automatic Dependent Surveillance-Broadcast; flight management system; weather radar, radar altimeter, and a cockpit data recorder.

The METS aircraft also shall have tricycle landing gear and a reconfigurable cargo bay in the cabin.

Pierson said the basic King Air is very close to what the requirements are.

Textron also builds the UC-12W operational support aircraft, a variant of the King Air 350, for the Marine Corps. The company

also built the Navy's T-6A/B Texan II single-engine training aircraft. Beech and Cessna are now brand names for some of Textron Aviation's products.

Naval Air Warfare Centers Have 'Sense of Urgency' to Field Improvements



U.S. Navy's Blue Water logistics Unmanned Aerial System, from the Naval Air Warfare Center Aircraft Division's UX-24 Unmanned Test Squadron, takes off from the flight deck of Military Sealift Command's fleet replenishment oiler USNS Joshua Humphreys (T-A0 188) while the ship was at sea in the Atlantic Ocean, July 16. This UAS flight proved the feasibility of using unmanned aircraft to transport small payloads of cargo from one ship to another while operating in a maritime environment. U.S. NAVY / Bill Mesta NATIONAL HARBOR, Md. – In an era when the defense acquisition process often appears ponderous and painfully slow, the Naval Air Warfare Centers have a "sense of urgency" and, the organization, talents and authorities to move needed improvements to naval aircraft and systems from concept to fielding in a fraction of the expected time. That speed of achievement is a weapon of war," Jerry Swift, director AIRWorks, a division of the Naval Air Warfare Center Aircraft Division (NAWCAD), said April 6.

The network of NAWCs can move quicker than the standard acquisition process due to the ability to quickly scan commercially available technologies, work with industrial partners on acquiring needed components, and internally performing rapid prototyping and testing, Swift said in a briefing at Sea-Air-Space 2022. And it has authorities Congress provided in acquisition reforms to execute that accelerated process, he said.

The NAWCs do not produce aircraft, but they assess the capabilities of those platforms, identify gaps and then move rapidly to find, test and field the needed improvements, Swift said. He offered the example of meeting the need of a blue water logistic program for a small unmanned aircraft with vertical takeoff and landing capability with a 50-pound payload. They screened the available systems, quickly trim the list and within a year conducted shore-to-ship, then ship-to-ship ability and fielded the system in less than the normal multi-year time frame, he said.

He also listed similarly rapid development and fielding of a way to install a number of anti-mine technologies into a pod that is now being deployed on the MQ-8C Fire Scout UAV, and a gunner's seat for the MH-60 helicopters that reduced the gunner's back problems on long missions and could withstand the impact of a hard landing. That seat is now fielded in the entire MH-60 fleet, he said.

The centers' work is guided by the demands from NAWCAD commander Rear Adm. John Lemmon, to install a "sense of urgency," and from Vice Adm. Carl Chebi, commander of Naval Air Systems Command.

"We're here to make sure that Navy and Marine Corps aviation remains relevant," he said.

Northrop Grumman Laser Weapon System Completes Deployment on USS Portland



Amphibious transport dock USS Portland (LPD 27) transits the Gulf of Aden, Dec. 13, with a Solid State Laser – Technology Maturation Laser Weapons System Demonstrator Mark 2 MOD 0 on board. The Office of Naval Research selected Portland to host the laser weapon technology in 2018. U.S. MARINE CORPS / Lance Cpl. Patrick Katz

NATIONAL HARBOR, Md. – The Laser Weapon System Demonstrator deployed on the U.S. Navy's amphibious platform dock ship USS Portland (LPD 27) has competed its first deployment as the Portland returned to its homeport of San Diego in March.

Donna Howland, Northrop Grumman's acting business development director for Directed Energy and program manager Laser Weapon System – Demonstrator, told *Seapower* April 6 the Navy said it was "able to exercise the high-energy laser in the 5th Fleet in December 2021."

The single LWSD was installed on Portland in October 2019 and was first lit-off in December 2019. The Portland deployed for the Indo-Pacific and Central Command areas of responsibility in August 2021.

The 150-kilowatt LWSD is mounted on the superstructure of the Portland and is integrated with the ship's combat information center, where a control console is installed. Northrop Grumman made the Tactical Laser Core Module of the system, while the U.S. government made the system's energy and thermal storage modules.

Northrop Grumman continues to provide test and sustainment support for the LWSD, for which it is under contract through fiscal 2022, Howland said, who noted that the company is working on a follow-on sustainment contract.

During the deployment on the Portland, the LWSD was operated and maintained completely by Sailors. No company employees were on board to support the system. The company provided training on the system before the deployment and developed a three-volume operation and maintenance manual for Sailors to use on the ship, she said.

Howland said the company is looking forward to working with the Office of Naval Research to provide next-generation directed energy systems.

"We are excited about the MOSA [Modular Open System Architecture] that the Navy is looking at," she said. "We really are a proponent of this as we believe it will improve the health of the supply chain and base to support directed energy as we move these systems from science fiction to science fact."

Open-Source Data Brings Challenge and Opportunity



Megan Dane, director of plans and programs in the Office of Naval Intelligence, makes a point during a panel discussion on open-source data. *LISA NIPP* NATIONAL HARBOR, Md. – Open-source data is a "fascinating," if vexing, issue that has transformed how information is disseminated and consumed, according IT professionals in an April 5 panel discussion at Sea-Air-Space 2022.

"When we say open-source intelligence and open-source information, it could be literally anything you see on the internet," said moderator Shane Harris, a senior national security writer at the Washington Post. "It could be things that are produced by the press. It is tweets, it is YouTube videos. It is an overwhelming amount of information."

Panelist Joseph Obernberger, a software engineer in Space & Intel for Peraton, said his interest is in "big data." Peraton assists government agencies with global national security, enterprise IT and cyber solutions and supports missions that include cyber, digital, cloud, operations and engineering. Obernberger said the problem with scale and managing information is a priority for him. Furthermore, open source is a challenge because there is so much data – "a lot of stuff" – in which the intelligence community is not interested to have as open source.

"[Open source data] is huge problem," said Obernberger. "The number of Tweets per day, the number of YouTube videos per day. Seven hundred and twenty thousand hours of YouTube videos are uploaded per day. If you were to watch that, it would take 82 years. So, how can we build systems that would scale to that level? If you consider just a billion records. If it takes a computer one millisecond to process a billion records, that is 11 and a half days for one system to do that. We need to deal with trillions of records."

Panelist Megan Dane, director of plans and programs in the Office of Naval Intelligence, said, "We are really concerned

with what types of information we are looking at and what we're not looking at. We try to really leverage the commercial industry and what you are able to create through big data analysis and things of that nature, and then really pinpoint through requirements what information sources and streams we need to ingest, and then really clear the way for our analysts so that they don't have to ingest or syphon through all the rest of it. That is really the most important part for us in that front-end proces."

Panelist Andy Henson, a senior vice president for artificial intelligence at SAIC, said it has "gotten harder to know what matters." He suggested a method for handling so much data involves knowing what to look for.

"My simple filter is, what question do we want to ask with the data?" Henson said. "That gets rid of a lot of noise. What question do we want to ask of the data, and then we can get to a real subset of the data and start getting at some of those challenges."

Leidos PM: Big Vendors Must Do More to Open Electronic Warfare Interfaces to Developers



Leidos' Ran Hidalgo discusses the software challenges with electronic warfare, stating, "A number of times, there were problems I had never seen until I'm actually in flight." *LISA NIPP*

NATIONAL HARBOR, Md. – In order to push future advancements in the area of electronic warfare, industry must find a way to open their interfaces to software developers, a Leidos program manager said during a panel discussion on electronic warfare at the Navy League's annual Sea-Air-Space symposium here on Tuesday.

One of the key challenges in the EW realm is trying to work out problems with software before sending it back to the vendor, said Ran Hidalgo, a program manager for Leidos, who said he sees this issue in his own experiences with flight.

"A number of times, there were problems I had never seen until I'm actually in flight," Hidalgo said. "I'm finding that software starts to reset for no reason. Why is that? Well, we've got to figure that out." The next step is to take it back to the vendor, but that slows down development, he said.

"You're trying to minimize those situations where you have to kick things back to the vendor in order to actually resolve [the issue]," he said.

Hidalgo said that a lot of the future innovation with EW systems won't happen with vendors who are building those systems today, but rather with software companies down the road. He pointed to the iPhone and how it revolutionized technology, but noted that it wasn't the iPhone itself that has had the impact but the apps it hosts.

"I think about EW in this same manner when it comes to this technology," he said. "Allowing third-party developers open access to existing systems and future systems is really changing the game in terms of how EW systems can be handled."

However, bigger vendors are often resistant to this movement, and that is why industry and the government need to rethink things to an extent, Hidalgo argued.

"That is a challenge, because a lot of OEMs [original equipment manufacturers] and the big vendors that build EW systems today don't necessarily like to expose their interfaces," he said. "We get it, it's a business, but I think there needs to be some sort of concerted effort between the services, the government and industry to allow other players to play." Coast Guard is Upping its Game on Cyber, Human Resources and Equipment, Panelists Say



Capt. Laura D. Collins, acting director of civilian human resources at the Diversity and Leadership Directorate, discusses Coast Guard advances in training while Capt. Russell E. "Rusty" Dash, the C51 Service Center commanding officer, looks on. *BRETT DAVIS*

NATIONAL HARBOR, Md. – In his last Sea-Air-Space visit in uniform, U.S. Coast Guard Commandant Karl Schultz led a panel discussion about the service, which is rapidly seeking to upgrade its equipment, software and human resources to keep up in a competitive world.

"The demand for Coast Guard services, at home and abroad, has never been higher," Schultz said. He introduced his nominated successor, Adm. Linda Fagan, the current vice commandant, and her nominated vice commandant, Vice Adm. Steven D. Poulin.

"I will sleep well at night," Schultz said. "They are rock stars and we are in good hands."

Schultz guided the panel through a discussion of how the service is upping its game when it comes to connectivity, human resources and equipment, including ships to replace or augment an aging fleet.

Capt. Russell E. "Rusty" Dash, the C51 Service Center commanding officer, said under Shultz's direction the Coast Guard kicked off a "tech revolution" in March 2020, to try to get away from the service's reputation of delivering "yesterday's technology tomorrow.

"The tech revolution is about empowering the people of the Coast Guard with reliable, mobile and integrated capabilities so they can better do their job," he said, noting that most Coast Guard work doesn't take place behind a desk.

It's a mobile-first approach that gives Coasties the hardware and apps they need to "do their work wherever they do their work," and includes beefing up cutter connectivity as well as on-shore networks.

The service is also getting ready to turn on a "software factory," based on the Air Force software factory model, to promote "software developed by Coasties for Coasties in a standard way," Dash said.

Capt. Laura D. Collins, acting director of civilian human resources at the Diversity and Leadership Directorate, said the service is taking a similar approach with its people.

"We want a best-in-class workforce for a best-in-class Coast Guard," she said, building on a document called Ready Workforce 2030, which calls for modernized learning and training tailored to the individual.

"In order to be the employer of choice, we've got to train to retain," she said, including on-demand e-learning not just training at dedicated centers.



Navy League CEO Mike Stevens, left, and National President David Reilly, right, present Coast Guard Commandant Adm. Karl Schultz with the Navy League Scroll of Honor. *BRETT DAVIS* Rear Adm. Douglas Schofield, assistant commandant for acquisition and chief acquisition officer, highlighted new ships coming on line, include the offshore patrol cutter and a new icebreaker.

The offshore patrol cutter joins new national security cutters and fast response cutters, and will complement them through its presence in exclusive economic zones and beyond.

"It is critical for that multi-mission presence that you always talk about, sir," and has "outstanding human system integration," including common boat launch systems and helicopter accommodations.

Schultz noted there is significant conversations about how many ships the U.S. Navy has, but the question of how many ships the Coast Guard has tends to fall under the radar.

"We're going to have a fleet of 100 new ships here. When you roll in these 11 national security cutters ... 64, now 66, fast response cutters, 25 OPCs, that is a fleet of 100 very capable ships ... I think that 100 is going to continue to up our game."

At the end of the breakfast, Schultz was presented with the Navy League Scroll of Honor by National President David Reilly and CEO Mike Stevens.

Coast Guard Offloads \$20 Million in Cocaine Following At-Sea Drug Bust Near P.R.



Coast Guard Cutter Donald Horsley's crew offloaded approximately 1,000 kilograms of seized cocaine, valued at \$20 million dollars, at Coast Guard Base San Juan April 4, 2022, following the interdiction of a go-fast vessel March 30, 2022, in the Caribbean Sea near Puerto Rico. *U.S. COAST GUARD* SAN JUAN, Puerto Rico – The Coast Guard Cutter Donald Horsley crew and Drug Enforcement Administration special agents offloaded approximately 1,000 kilograms of seized cocaine at Coast Guard Base San Juan April 4, following the interdiction of a go-fast vessel in the Caribbean Sea near Puerto Rico, the Coast Guard 7th District said in a release.

This interdiction is the result of multi-agency efforts involving the Caribbean Border Interagency Group and the Caribbean Corridor Strike Force. The seized cocaine has an estimated wholesale value of approximately \$20 million dollars.

During a routine patrol March 30, the crew of a Customs and

Border Protection multi-mission enforcement aircraft sighted a suspect vessel near Aguadilla, Puerto Rico. Coast Guard watchstanders in Sector San Juan diverted the cutter Donald Horsley that arrived on scene and interdicted a 35-foot gofast vessel. The vessel was carrying two men, Dominican Republic nationals and multiple bales of suspected contraband, which tested positive for cocaine. The cutter Donald Horsley crew apprehended the two men and seized 33 bales of cocaine.

"This case highlights the Coast Guard's unwavering resolve and that of our fellow partners to interdict drug smuggling vessels at sea and safeguard the nation's southernmost maritime border," said Capt. Gregory H. Magee, Sector San Juan commander. "These partnerships are key to achieving to protecting our citizens in Puerto Rico and the U.S. Virgin Islands from drug trafficking and other smuggling threats in the Caribbean."

Drug Enforcement Administration Special Agents received custody of the detainees and the seized contraband, and they are leading the investigation into this case.

Cutter Donald Horsley is a 154-foot fast response cutter homeported in San Juan, Puerto Rico.

Coast Guard Begins Multi-Month Fisheries Enforcement Operation With Bermuda



Coast Guard Cutter Angela McShan crew underway near Miami, Sept. 20, 2019. U.S. COAST GUARD / Petty Officer 3rd Class Brandon Murray

PORTSMOUTH, Va. – U.S. Coast Guard Cutter Angela McShan (WPC-1135) is scheduled to arrive in Bermuda on April 6 as part of a multi-month fisheries enforcement operation in concert with the Bermuda Department of Environment and Natural Resources, Royal Bermuda Regiment, Bermuda Coast Guard and Bermuda Police Services, the Coast Guard 5th District said in a release.

The cutter will be the first of three Coast Guard ships that will patrol seaward of the Bermuda Exclusive Economic Zone, which extends 230 miles from shore. The joint operation will expand upon the long-standing U.S.-Bermuda partnership, as well as emphasize protection of the environment and living marine resources in this region.

The operation is a result of recent meetings between Bermuda's Deputy Governor Alison Crocket, Deputy Premier Walter Roban, Permanent Secretary in Bermuda's Ministry of Home Affairs Rozy Azhar, U.S. Consul General in Bermuda Karen Grissette and Rear Adm. Laura Dickey, the U.S. Coast Guard Fifth District Commander. The professional exchange focused on increasing efforts to counter illegal, unreported and unregulated fishing, a global issue recently detected in the Mid-Atlantic.

"It was an honor to meet Rear Admiral Dickey and her staff, along with the U.S. consul and her staff," noted Deputy Premier Roban. "This operation begins a new chapter of cooperation with the U.S. government in supporting illegal, unreported fishing and other unacceptable activity in our waters. All is as a result of a meeting held with the National Climate Advisor to U.S. President Biden, Gina McCarthy, at COP26 where we discussed matters important to Bermuda and the United States. The willingness of the United States to support Bermuda in our effort to oversee our EEZ is in step with our centuries' long relationship as neighbors. My gratitude on behalf of the people of Bermuda extends to the U.S. Consul's Office in Bermuda for facilitating these meetings and the support we will get from the United States Coast Guard."

As the worldwide demand for fish as a protein source continues to grow, IUU fishing will have a profound impact on the security of all countries with a maritime boundary. Left unenforced, IUU fishing will threaten global geopolitical security, undermine maritime governance and impact a nation's ability to achieve domestic food security.

"We're excited to join with Bermuda to help detect and monitor potential IUU fishing in the region," said Rear Adm. Dickey. "As we each work to safeguard our respective Exclusive Economic Zones, we're fortunate to build on our long-standing relationship to partner together in this effort to protect global fish stocks and promote adherence to international rules."

"The United States is proud to partner with Bermuda to promote

security and lawful conduct in the Atlantic region," added U.S. Consul General Karen Grissette. "Reinforcing the United States' security partnership with Bermuda is one of my top priorities, so I am proud to welcome these U.S. Coast Guard cutters to advance our shared interests. This important operation is one more tangible demonstration of the close security collaboration between Bermuda and the United States."

The Sentinel-class fast response cutter (WPC) is a key component of the Coast Guard's offshore fleet that is capable of deploying independently to conduct missions that include port, waterways and coastal security, fishery patrols, search and rescue, and national defense.

Early Days in the Sea Services Helped Focus Their Careers, Women Leaders Say



Rear Adm. Megan Dean, director of government and public affairs at the Coast Guard, makes a point during the Women's Leadership session. *LISA NIPP*

NATIONAL HARBOR, Md. – Senior-level women from across the sea services shared personal and professional insights and anecdotes about their earliest days in the military, and what helped guide them to the tops of their fields, in a panel discussion on Women's Leadership on April 5 at Sea-Air-Space 2022.

U.S. Navy Capt. Emily Bassett, serving as moderator of the panel, also hosted the event on behalf of the Sea Service Leadership Association. Bassett is president of SSLA, the only nonprofit, national, volunteer-driven organization dedicated to the promotion, advancement and mentorship of women in the U.S. Navy, Marine Corps, Coast Guard, and National Oceanic and Atmospheric Association.

"Today's event is a women's panel, but really it's about people," Bassett said. "It's not just about diversity of gender, it's about diversity of thought and it's about bringing our whole selves to the table. Today's focus will be women leaders ... who have made it to the top of their teams [and] who are willing to share their story."

Maj. Gen. Bobbi Shea is the legislative assistant to the Commandant of U.S. Marine Corps. Shea described herself as a "distracted youth" when she was a child growing up.

"I spent a lot less time in high school than … I should have," Shea said. "So, I enlisted in the Marine Corps really not knowing what I was getting into. But I will tell you when I put my feet on those yellow footprints in Paris Island, I tell people it was like coming home. Coming home to place that I had never been before. The discipline, the challenges, the rigor, the teamwork — all of these standard, base concepts quite frankly were foreign to me growing up."

Shea said what she learned early on at boot camp was that meeting the challenges and standards was not so much about personal ambition, but "what you could bring to the team." She said this thinking, more than personal ambition, drove her behavior and informed how hard she worked and how hard she tried.

Rear Adm. Megan Dean, director of government and public affairs for U.S. Coast Guard, said she wasn't sure she was a good fit for the Coast Guard when she attended the U.S. Coast Guard Academy. Her feelings changed shortly after she graduated.

"I will tell you, I graduated, I got my commission. I showed up to my first unit, which was a 210-foot Coast Guard Cutter," Dean said. "Our mission was mainly search and rescue and law enforcement all up and down the East Coast to the Caribbean, and I will tell you that I felt like I fit — that my talents matched those of my chosen profession."