

# Coast Guard, DHS S&T Ventures into Space with Polar Scout Launch

WASHINGTON – The Coast Guard Research, Development, Test, and Evaluation (RDT&E) Program, in partnership with the Department of Homeland Security (DHS) Science and Technology Directorate (S&T), launched two CubeSats from Vandenberg Air Force Base, California, Dec. 3, the Coast Guard said in a release.

The launch is part of the Polar Scout project to evaluate the effectiveness of space-based sensors in support of Arctic search and rescue missions. Knowledge gained from this demonstration will be used to inform satellite technology recommendations for many potential applications within the Coast Guard and across DHS.

Jim Knight, the Coast Guard deputy assistant commandant for acquisition, said in ceremonies leading up to the launch, “The Polar Scout project presents an opportunity to evaluate the most efficient way to ensure that the United States can project surface presence in the Arctic when and where it is needed while filling an immediate Search and Rescue capability gap in these remote areas.”

The CubeSats, dubbed Yukon and Kodiak, were launched into a low-earth polar orbit on a rideshare with other spacecraft from 17 different countries. This economical alternative to a costly single-mission launch ensured dozens of spacecrafts from various organizations reached orbit. Success of the mission was due to public and private sector collaboration throughout the process, from developing the CubeSats to propelling them into space.

“In order to demonstrate, test and evaluate the viability and utility of CubeSats for Coast Guard missions, the Coast Guard

RDT&E Program has partnered with DHS S&T to conduct on-orbit testing of CubeSats using the Mobile CubeSat Command and Control (MC3) ground network,” said Holly Wendelin, command, control, communications, computers, intelligence, surveillance and reconnaissance domain lead.

Developed as a potential capability bridge between the current 20-year-old international search-and-rescue architecture and its future successor, “CubeSats serve as a much smaller, more cost-efficient solution that can be easily implemented over a short period of time. Each are only about the size of a shoebox,” said John McEntee, director of Border Immigration and Maritime at S&T.

In the 18 months leading up to the launch, DHS S&T handled the fabrication of Yukon and Kodiak, which are tailored specifically to detect 406 MHz emergency distress beacons. At the same time, the Coast Guard Research and Development Center deployed two ground stations – one at the Coast Guard Academy in New London, Connecticut, and one at University of Alaska Fairbanks – using the MC3 architecture and network. The ground stations will receive all of the signals from the CubeSats during the demonstration.

DHS will begin testing and demonstrations using emergency distress beacons in the Arctic beginning early next year and continuing through the summer.

“The demonstrations will include downlinking 406 MHz emergency distress beacon data from the CubeSats using the deployed MC3 ground stations,” Wendelin said. “We will set the beacons off, the satellite should detect it and send signals back to the ground station.” The testing period is expected to provide critical knowledge on how CubeSat technology can be used to enhance Coast Guard and DHS mission performance.

The Polar Scout project is providing valuable insight on the process, cost and feasibility of acquiring and using organic

satellites. The Coast Guard and DHS will use the knowledge gained from Polar Scout and the MC3 installs, market research and space mission design and assessments to develop satellite technology recommendations.

As Coast Guard missions become more challenging and complex, the use of small and inexpensive satellites has the potential for great impact. Potential uses for satellites include improving communication in the arctic environment, monitoring large areas for illegal activity and helping to locate persons lost at sea. Additionally, the use of satellites has the potential to reduce the time and resources spent on intensive aircraft searches as well as the risks associated with placing personnel in hazardous situations that only need sensors and communications on scene.

“Undoubtedly, the results and knowledge gained by the Polar Scout Satellite Project will lead to force-multiplying solutions for the Department, which is a big priority in this age of complex threat cycles,” said Bill Bryan, senior official performing the duties of undersecretary for the Science and Technology Directorate.

Through Polar Scout’s robust search-and-rescue satellite solution, the Coast Guard may be empowered to respond to maritime disasters with unprecedented speed, preserving lives and even cargo, along trade routes in the Arctic Circle.

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## **Coast Guard Icebreaker Returns Home Following 129-**

# Day Arctic Deployment

SEATTLE – The crew of the U.S. Coast Guard Cutter Healy returned home Nov. 30e following a four-month deployment in the Arctic, the Coast Guard Pacific Area in a release.

In addition to providing presence and access in the Arctic during the 129-day summer deployment, the Healy crew completed three research missions in partnership with the National Science Foundation, the National Oceanic and Atmospheric Administration (NOAA) and the Office of Naval Research, conducting physical and biological research in the Arctic Ocean.

The crew's first mission was a NOAA-sponsored project aimed at furthering the understanding of the changing biological picture in the Arctic, along with studying the physical oceanography and offshore ocean currents in both the Chukchi and Beaufort Seas. The findings from this mission will aid scientists in studying the biological conditions in the Polar region.

The second mission, supported by the Office of Naval Research, is part of a larger, multiyear Arctic study program. This mission focused on studying the effects of water inflow and surface force changes on ocean stratification and sea ice in the Beaufort Sea. In completing this mission, the Healy crew deployed specialized instruments on ice floes and placed subsurface moorings on the seafloor, which will remain in the Arctic until next year.

Healy's final mission, sponsored by the National Science Foundation, was aimed at understanding the effects of the Pacific and Atlantic water-inflow and the associated boundary current in the Arctic ecosystem. As part of a multi-year endeavor, this study captures measurements from subsurface moorings deployed on the Barrow Canyon Slope as well as data

collected from Healy's onboard scientific equipment.

Under the command of U.S. Coast Guard Capt. Greg Tlapa, Healy is the nation's premiere high-latitude research vessel and is the only U.S. military surface vessel that deploys to and is capable of operating in the ice-covered waters of the Arctic. In addition to science operations, Healy is capable of conducting a range of Coast Guard operations such as search and rescue, ship escorts, environmental protection and the enforcement of laws and treaties in the Polar regions. Healy provides access and presence throughout the Arctic region to protect U.S. maritime borders and to safeguard the maritime economy.

At 420 feet long, with a displacement of over 16,000 tons and a permanent crew of 87, Healy is the largest ship in the U.S. Coast Guard. Commissioned in 2000, Healy is one of two active icebreakers in the U.S. fleet; the other is the Coast Guard Cutter Polar Star, the service's only heavy icebreaker, homeported in Seattle. Commissioned in 1976, the Polar Star recently departed for a four-month Antarctic deployment to support Operation Deep Freeze 2019.

Operation Deep Freeze is the logistical support provided by the U.S. armed forces to the U.S. Antarctic Program. During Operation Deep Freeze the Polar Star carves a navigable path through seasonal and multiyear ice, sometimes as much as 10-foot thick, for supply ships to deliver annual operating supplies and fuel to National Science Foundation research stations in Antarctica.

The Coast Guard has been the sole provider of the nation's polar icebreaking capability since 1965 and is seeking to increase its icebreaking fleet with six new Polar Security Cutters in order to ensure continued national presence and access to the Polar Regions.

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# Volvo Penta to Supply Engines for Next-Generation RIBs for Coast Guard Cutters

CHESAPEAKE, Va. – Volvo Penta of the Americas has been selected to supply the engines, drives and controls for the new U.S. Coast Guard cutter boat large (CBL) rigid-hull inflatable boats (RIBs), which are being built at Metal Craft Marine.

The boats will be powered by Volvo Penta three-liter 220 hp diesel Aquamatic sterndrive systems with HD controls.

The Coast Guard awarded a five-year indefinite-delivery/indefinite-quantity (IDIQ) contract to Metal Craft to build and deliver a minimum of 46 new 7-meter RIBs with deliveries to begin in 2019. They will be constructed at Metal Craft's shipyard in Cape Vincent, New York.

The RIBs are designed for a top speed of 35-plus knots carrying up to 13 passengers with an operating range of 200 nautical miles in up to 4-meter wave heights. They will be carried on three different classes of U.S. Coast Guard cutters.

“The Volvo Penta diesel sterndrives are the perfect propulsion package for these rugged workhorse RIBs,” said Bob Clark, contracts manager at Metal Craft Marine. “They have an unsurpassed reputation for dependable performance under the most difficult conditions, and Volvo Penta's extensive global service network ensures rapid availability of spare parts and technical support will ensure maximum uptime for these critical shipboard assets.”

“We will work closely with the Metal Craft shipyard team to provide smooth and seamless installation and validation of the propulsion system on each boat to ensure the boats are delivered on time,” said Jens Bering, vice president of marine sales at Volvo Penta of the Americas.

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## **Coast Guard Repatriates 11 Migrants to Cuba**

MIAMI – The Coast Guard Cutter Isaac Mayo crew repatriated 11 Cuban migrants Nov. 29 to Cuba, the 7th Coast Guard District said in a release.

A good Samaritan located a rustic vessel approximately 18 miles southeast of Islamorada on Nov. 26. A Coast Guard Station Islamorada 33-foot Special Purpose Craft-Law Enforcement interdicted the migrants and transferred them to the Coast Guard Cutter Charles David Jr. when it arrived on scene.

“The Coast Guard bears the responsibility of enforcing immigration laws with our partners and securing the maritime domain, while also ensuring the safety of life at sea,” said Lt. j.g. Vladimir Domanskiy, executive officer of Isaac Mayo. “The rustic vessels we interdict are often overloaded, manifestly unsafe and the people aboard may have been at sea for days without proper food, water or medical attention. The individuals repatriated were stranded at sea for more than a week and the crews of the cutters Charles David, Jr. and Isaac Mayo ensured they were cared for and treated with the utmost respect following their rescue.”

Once aboard Coast Guard cutters, all migrants receive food,

water, shelter and medical attention.

Approximately 137 Cuban migrants have attempted to illegally enter the U.S. via the maritime environment since fiscal 2019 began on Oct. 1, compared to 384 Cuban migrants in fiscal 2018. These numbers represent the total number of at-sea interdictions, landings and disruptions in the Florida Straits, the Caribbean and Atlantic.

The cutters Charles David Jr. and Isaac Mayo are 154-foot Sentinel-class cutters homeported in Key West, Florida.

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## **Coast Guard Repatriates 74 Dominican Migrants After Four At-Sea Interdictions**

SAN JUAN, Puerto Rico – The Coast Guard returned 74 Dominican migrants to law enforcement authorities in Santo Domingo, Dominican Republic, Nov. 27 following the at-sea interdictions of four migrant vessels off Puerto Rico, the 7th Coast Guard District said in a release.

The interdictions were a result of ongoing efforts in support of Operation Unified Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group.

“While smugglers will continue to sell false promises and mislead migrants into unsafe and illegal attempts to cross maritime borders, the Coast Guard and our partners will continue to diligently patrol the Florida Straits and Caribbean Sea to stop these voyages before they end in tragedy and ensure the security of the United States,” said Capt.

James Passarelli, chief of staff of the 7th Coast Guard District. "When these voyages are discovered by the Coast Guard or by our partners, these migrants are rescued from their unseaworthy vessels, cared for humanely by our crews, and promptly repatriated to their country of origin or departure."

Ramey Sector Border Patrol agents detected the first migrant vessel early Nov. 25, approximately eight nautical miles west of Punta Borinquen in Aguadilla, Puerto Rico. Coast Guard watchstanders diverted the Cutter Resolute that responded along with a Puerto Rico Police Joint Forces of Rapid Action marine unit. The crew of the police marine unit interdicted the makeshift boat that was carrying nine people onboard, seven men and two women, who claimed Dominican nationality. Resolute arrived on scene shortly thereafter, safely embarked the migrants and destroyed the migrant vessel as a hazard to navigation. The migrants were subsequently transferred from the Resolute to the Cutter Donald Horsley.

Donald Horsley interdicted a second migrant vessel Nov. 25, after the crew of a patrolling Coast Guard HC-144 Ocean Sentry aircraft detected the 25-foot makeshift boat, approximately 12 nautical miles off Mona Island, Puerto Rico. The cutter crew safely embarked 16 Dominican men from the migrant boat and destroyed the vessel as a hazard to navigation.

The crew of a patrolling MH-65 Dolphin helicopter detected a third migrant vessel Nov. 26, approximately three nautical miles off the northern coast of Camuy, Puerto Rico. Responding Puerto Rico Police Joint Forces of Rapid Action marine units interdicted the 28-foot makeshift boat that was carrying 18 Dominican men onboard. Donald Horsley arrived on scene shortly thereafter and safely embarked the migrants, while Puerto Rico Police crews took custody of the migrant boat.

During a routine patrol of the Mona Passage Nov. 26, the crew of a Customs and Border Protection (CBP) Caribbean Air and

Marine DHC-8 maritime patrol aircraft detected a 30-foot makeshift boat, approximately 35 nautical miles northwest of Aguadilla. Donald Horsley and a CBP marine unit arrived on scene and interdicted the migrant vessel with 31 people onboard, 27 men and four women, who claimed Dominican nationality. The Donald Horsley crew safely embarked the migrants, while the crew of the CBP marine unit took custody of the migrant vessel.

Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention

Resolute is a 210-foot medium endurance cutter homeported in Key West, Florida, while Donald Horsley is a 154-foot fast response cutter homeported in San Juan.

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## **Coast Guard Repatriates 27 Migrants to Cuba**

MIAMI – The Coast Guard Cutter Charles David Jr. crew repatriated 27 Cuban migrants Nov. 22 to Cuba, the 7th Coast Guard District said in a release.

A Coast Guard Air Station Miami HC-144 Ocean Sentry airplane crew located a rustic vessel traveling northbound approximately 29 miles north of Cuba Nov. 17. Charles David Jr. arrived on scene and safely embarked 27 Cuban migrants who attempted to enter the United States illegally.

“The Coast Guard diligently patrols the Florida Straits and Caribbean Sea to ensure the safety of life at sea and the security of the United States. United States policy is to promote safe, orderly and legal travel and migration,” said

Rear Adm. Peter Brown, commander of the 7th District and director of Homeland Security Task Force Southeast. “When unsafe, disorderly and illegal maritime migration attempts are discovered by the Coast Guard or our partners, migrants are rescued from distress, humanely treated and promptly repatriated to their country of origin or departure.”

Once aboard Coast Guard cutters, all migrants receive food, water, shelter and medical attention.

Approximately 296 Cuban migrants have attempted to illegally enter the U.S. via the maritime environment since Oct. 1 in fiscal 2018 compared to 2,098 Cuban migrants in fiscal 2017. These numbers represent the total number of at-sea interdictions, landings and disruptions in the Florida Straits, the Caribbean and Atlantic.

Charles David Jr. is a 154-foot Sentinel-class cutter homeported in Key West, Florida.

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## **Coast Guard Offloads 18.5 Tons of Cocaine in Port Everglades**

MIAMI – The crew of the Coast Guard Cutter James offloaded approximately 18.5 tons of cocaine Nov. 15 in Port Everglades worth more than an estimated \$500 million wholesale seized in international waters in the Eastern Pacific Ocean, the 7th Coast Guard District said in a release.

The drugs were interdicted off the coasts of Mexico, Central and South America by multiple U.S. Coast Guard cutters.

The offload represents 15 separate, suspected drug-smuggling vessel interdictions by the Coast Guard:

■ James was responsible for nine cases seizing an estimated 19,288 pounds of cocaine.

■ Bear was responsible for one case, seizing an estimated 44 pounds of cocaine.

■ Stratton was responsible for one case, seizing an estimated 440 pounds of cocaine.

■ Active was responsible for two cases, seizing an estimated 3,148 pounds of cocaine.

■ Dauntless was responsible for two cases, seizing an estimated 2,050 pounds of cocaine.

■ Venturous was responsible for two cases seizing an estimated 3,100 pounds of cocaine.

■ Spencer was responsible for one case seizing an estimated 4,497 pounds of cocaine.

■ Campbell was responsible for one case seizing an estimated 5,441 pounds of cocaine.

Numerous U.S. agencies from the Departments of Defense, Justice and Homeland Security are involved in the effort to combat transnational organized crime. The Coast Guard, Navy, Customs and Border Protection, FBI, Drug Enforcement Administration, and Immigration and Customs Enforcement, along with allied and international partner agencies, play a role in counter-drug operations. The fight against transnational organized crime networks in the Eastern Pacific requires unity of effort in all phases from detection, monitoring and interdictions, to prosecutions by U.S. Attorneys in California, on the East Coast and in Puerto Rico.

Bear is a 270-foot medium-endurance cutter homeported in Portsmouth, Virginia. Stratton is a 418-foot Legend-class cutter homeported in Alameda, California. Active is a 210-foot Reliance-class cutter homeported in Port Angeles, Washington. Dauntless is a 210-foot Reliance-class cutter homeported in Pensacola, Florida. Venturous is a 210-foot Reliance-class

cutter homeported in St. Petersburg, Florida. James is a 418-foot Legend-class cutter homeported in North Charleston, South Carolina. Spencer is a 270-foot medium-endurance cutter homeported in Boston. Campbell is a 270-foot medium-endurance cutter homeported in Kittery, Maine.

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## **Coast Guard Repatriates 86 Haitian Migrants**

MIAMI – The Coast Guard Cutter Thetis crew repatriated 86 Haitian migrants Nov. 11 to Cap-Haïtien, Haiti, the 7th Coast Guard District said in a release.

While on routine patrol, a Coast Guard Air Station Clearwater MH-60 Jayhawk helicopter crew, forward deployed to Great Inagua, Bahamas, located an overlaed 40-foot sail freighter 26 nautical miles north of Punta Maisi, Cuba. Thetis was diverted, arrived on scene and safely embarked the migrants for safety of life at sea concerns.

The Jayhawk helicopter crew provided overhead support while embarkation was conducted due to deteriorating weather in the area.

“This illegal migrant venture and vessel were ill-equipped to carry its passengers and dangerously overloaded,” said Cmdr. Luis Rodriguez, deputy chief of enforcement. “If it had capsized before we arrived on scene, this situation could have ended differently as we have tragically seen before.”

Once aboard Coast Guard cutters, all migrants receive food, water, shelter and medical attention.

Approximately 221 Haitian migrants have attempted to illegally migrate to the U.S. via the maritime environment since Oct. 1 compared to 2,488 Haitian migrants in fiscal year 2018. These numbers represent the total number of at-sea interdictions, landings and disruptions in the Florida Straits, the Caribbean and Atlantic.

Thetis is a 270-foot medium-endurance cutter homeported in Key West, Florida.

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## **First California-based Fast Response Cutter Commissioned in San Pedro**

SAN PEDRO, Calif. – The Coast Guard commissioned the first California-based 154-foot fast response cutter (FRC) in San Pedro Nov. 8, the 11th Coast Guard District said in a release.

Forrest Rednour is the first of four Sentinel-class FRC to be homeported at Base Los Angeles-Long Beach. Three additional FRCs are scheduled to be commissioned by next summer. While these ships will be based in San Pedro, they will operate throughout the 11th District, which includes all of California and international waters off Mexico and Central America.

“This cutter is specifically designed to face today’s threats in the maritime domain,” said. Rear Adm. Peter Gautier, the 11th District commander. “This cutter is faster, goes further and can do more than any other Coast Guard patrol boat.”

FRC’s are 154-foot multimission ships designed to conduct drug and migrant interdictions; ports, waterways and coastal

security operations; fisheries and environmental protection patrols; national defense missions; and search and rescue.

“This crew and I are truly honored and humbled to be assigned to serve as plank owners aboard this cutter named for a true Coast Guard hero,” said Lt. Graham Sherman, Forrest Rednour’s commanding officer.

To date, the Coast Guard has accepted delivery of 31 FRCs. Each ship is designed for a crew of 24, has a range of 2,500 miles and is equipped for patrols up to five days. The FRCs are part of the Coast Guard’s overall fleet modernization initiative.

FRCs feature advanced command, control, communications, computers, intelligence, surveillance and reconnaissance equipment, as well as over-the-horizon response boat deployment capability and improved habitability for the crew. The ships can reach speeds of 28 knots and are equipped to coordinate operations with partner agencies and long-range Coast Guard assets such as the national security cutters.

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## **Coast Guard Returns 71 Migrants to the Dominican Republic Following At-Sea Interdictions**

SAN JUAN, Puerto Rico – The Coast Guard returned 71 of 81 interdicted migrants to law enforcement authorities in Santo Domingo, Dominican Republic, over the weekend following multiple at-sea interdictions off Puerto Rico and the

Dominican Republic, the 7th District Coast Guard said in a Nov. 6 release.

Ten other migrants interdicted are facing federal prosecution in Puerto Rico for attempting to illegally re-enter a U.S. territory.

The interdictions were a result of ongoing efforts in support of Operation Unified Resolve, Operation Caribbean Guard and the Caribbean Border Interagency Group.

“Each vessel was grossly overloaded, which created an extremely dangerous and life-threatening situation for the people aboard,” said Cmdr. Christopher Douglas, chief of response for Coast Guard Sector San Juan. “The great coordination between the Coast Guard and our interagency partners prevented significant loss of life at sea.

“The Coast Guard and our local partners maintain a robust patrol presence in Puerto Rico and the Caribbean with both air and surface assets, and any migrant interdicted at sea regardless of nationality will be repatriated back to their country of origin,” he said.

During patrols from Oct. 31 through Nov. 2, aircrews with a Coast Guard HC-144 Ocean Sentry maritime patrol aircraft detected three grossly overloaded, makeshift boats in international waters traveling illegally toward Puerto Rico. The Coast Guard Cutter Richard Dixon crew interdicted and safely embarked 16 migrants from one vessel on Oct. 31; 53 migrants from a second vessel on Nov. 1 with the help of Customs and Border Protection Air and Marine Operations-Caribbean Air and Marine Branch crews; and 12 migrants from a third vessel on Nov. 2.

Dixon and Coast Guard Cutter Decisive returned the 71 migrants to Santo Domingo, Dominican Republic. The 10 migrants facing prosecution were transferred to the custody of Ramey Sector Border Patrol agents in Puerto Rico.

Once aboard a Coast Guard cutter, all migrants receive food, water, shelter and basic medical attention.

Decisive is a 210-foot medium-endurance cutter homeported in Pensacola, Florida, while Richard Dixon is a 154-foot fast response cutter homeported in San Juan.