

U.S. Navy Partners With Meteomatics to Pilot Weather Drones in Maritime Operations

Meteomatics' Meteodrones Aim to Fill Persistent Gap in Atmospheric Observation Over the Open Ocean

NEW YORK CITY, NY, UNITED STATES, December 11, 2025 /EINPresswire.com/ -- Weather intelligence and technology company [Meteomatics](#), today announced its work with the U.S. Navy, launching their automated weather drones, Meteodrones, from a moving vessel to collect frequently unobserved atmospheric data critical to maritime operations. Conducted as part of the Advanced Naval Technology Exercise (ANTX) in the Mississippi Sound near Gulfport, the trial has marked a step forward in enhancing operational readiness and safety for naval missions.

Naval operations rely on precise, localized weather intelligence, but capturing these insights on ships has historically proven difficult. Weather balloons are nearly impossible to launch and track reliably from moving vessels, and the broad coverage satellites provide, lack the vertical resolution needed for tactical decisions. This leaves the Navy with a blind spot in the first lower levels of the atmosphere - exactly where weather conditions most influence flight operations, radar performance, and mission safety.

"For the last decade, U.S. military weather services have sought to consistently and reliably measure the atmosphere over the open ocean to improve forecast accuracy and identify atmospheric anomalies," said Kevin Lacroix, Weather Services Technology Lead, Naval Meteorology and Oceanography Command. "Products with the capability to collect-high resolution, real-time atmospheric data, repeatedly, in environments of interest are valuable to military weather services for sensing the maritime boundary layer of the atmosphere."

To fill this gap, the U.S. Navy's Gulfport demonstration tested the Meteodrone's ability to launch and recover from a moving ship at speeds ranging from 1.5 knots to 16 knots. Operating under FAA regulations, shipboard Meteodrones collected complete vertical atmospheric profiles including temperature, humidity, pressure, dew point, and wind. Across multiple runs, the Meteodrones returned safely for recovery and the system validated stable and autonomous performance in a maritime environment.

With the real-time observations that the Meteodrones collect, the Navy can enhance mission safety by reducing risks for aircraft takeoffs, landing and in-flight operations. Additionally, they are able to strengthen operational readiness and improve awareness of how the environment

may extend or degrade radar and communication ranges.

"Beyond the weather forecasting improvements the real-time information gathered by the Meteodrone give us, we have an opportunity to feed critical information into our electromagnetic tactical decision aids, making the safety and security of the ship and the battlegroup more effective by optimizing our radar performance, LaCroix added. "Ship captains will have the confidence to make rapid decisions knowing that the METOC team has given them every advantage possible."

"This demonstration underscored not just the technical success of our Meteodrones, but also the practical value of capturing critical weather data at sea. By proving that launches and recoveries can be achieved from moving vessels, we've shown how Meteomatics can help the Navy bridge one of the most significant gaps in operational forecasting," said Brad Guay, Head of Government & Defense Solutions at Meteomatics.

Meteomatics is committed to working with the U.S. Navy, and other government partners, to continue bringing innovations from demonstration to deployment. Read more about the drones [here](#).

About Meteomatics

Meteomatics is a weather intelligence and technology company that enables precision forecasts of the weather's impact on businesses anywhere in the world at any time. More than 600 companies, including Tesla, CVS Health, Swiss Re, McCain, NASA, Honda, Airbus, Stellantis, and Axpo Power, rely on Meteomatics for weather data that can significantly impact everything from energy savings and logistics to process automation and risk management to product design. The company's robust approach to weather data collection, modeling, visualization, and delivery rivals even the most sophisticated government and commercial services. Its autonomous Meteodrone, paired with high-resolution weather models, enables granular visibility (down to a single square km) into weather phenomena that traditional weather sensing technology does not regularly or accurately observe. Meteomatics is headquartered in Switzerland, with local operations in the U.S. (New York City), the UK, Germany (Berlin), Norway (Oslo), and Spain.

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