Northrop Grumman Demonstrates MQ-4C Triton Navigation Systems Over the Arctic Ocean

The MQ-4C Triton is capable of operating at an altitude of over 50,000 feet, enabling it to fly above harsh weather conditions. Credit: Northrop Grumman

From Northrop Grumman

DEADHORSE, Alaska – Sept. 19, 2024 – Northrop Grumman Corporation (NYSE: NOC) successfully demonstrated the MQ-4C Triton navigation system's ability to operate at high latitudes deep within the Arctic Circle, delivering on its commitment to provide critical intelligence, surveillance, reconnaissance and targeting capabilities in the High North. The test flight proved the system's ability to operate in the

harsh austere environment over the Arctic Ocean. Triton's advanced technological design makes it the only autonomous high-altitude, long-endurance aircraft capable of operating at altitudes above 50,000 feet for durations of more than 24 hours.

The test flight, which began in Deadhorse, Alaska, and flew within 100 miles of the North Pole, utilized Northrop Grumman's proprietary navigation systems, mission management computer and upgraded operational flight programs to successfully demonstrate Triton's ability to navigate in the Arctic.

The test aircraft collected navigation data during the five-hour flight and remained within U.S. and Canadian airspace for the duration.

The demonstration also validated ground-based GPS alignment and initialization procedures to enable operations from runways above 70 degrees north latitude.

As a high-altitude, long-endurance platform, Triton is suited for missions in the High North by operating well above Arctic winds and avoiding the range and speed impacts that limit mission performance at medium altitudes.

Experts:

Jane Bishop, vice president and general manager, global surveillance division, Northrop Grumman: "Flight operations in austere and frigid conditions present unique navigation challenges. Our demonstration highlights Triton's ability to successfully perform in that challenging environment."

Capt. Josh Guerre, Triton program manager, U.S. Navy: "Arctic regions are an increasingly important theater of operations with unique threats and environments. We are ready to support those mission sets for domestic and international customers."

Details:

The flight test follows a similar demonstration conducted over the Gulf of Alaska in June 2023. During the Northern Edge 2023 exercise, Triton's radar demonstrated its unmatched ability to detect, track and image targets with weapon relevant accuracy and at a survivable range over a high-sea state environment.

As allies consider their options for acquiring uncrewed maritime surveillance aircraft, flight demonstrations prove Triton's ability to operate in challenging environments. Beyond navigation, surveillance operations in the High North are also challenged by strong winds and high seas. Triton's higher operating altitude of more than 50,000 feet enables operation above inclement weather that would limit medium altitude platforms limited to 10,000-30,000 feet. Triton's de-icing and anti-icing capabilities ensure it's mission-ready and capable of operations in extreme arctic conditions.

Built for the U.S. Navy and the Royal Australian Air Force, the multi-intelligence MQ-4C Triton supports a wide range of missions, including maritime patrol, signals intelligence and search and rescue. These aircraft operate at a higher altitude and have longer endurance than medium-altitude systems. They also incorporate simultaneous multi-intelligence sensor operations that allow them to deliver an exponential increase in mission information.