Navy’s Triton UAV’s IFC-4 Sensors, Systems ‘Performing Better Than Expected’

A MQ-4C Triton taxis at Andersen Air Force Base. U.S. AIR FORCE / Senior Airman Michael S. Murphy

National Harbor, Md. – The mission systems on the first MQ-4C Triton unmanned aerial vehicle (UAV) equipped with a signals intelligence capability functioned well on the first test flight, a Navy official said.

The first MQ-4C equipped with Integrated Functional Capability-Four (IFC-4) made its first flight on July 29, mainly to test the aerodynamic characteristics of the new configuration. The test team, while evaluating such aspects as stability and control, also checked out the performance of the mission systems and sensors. The IFC Triton featured more antennas than the baseline IFC version.

“The sensors and systems are performing better than expected,” said Capt. Dan Mackin, the Navy’s Persistent Maritime Unmanned Aircraft Systems program manager, speaking Aug. 3 at the Navy League’s Sea-Air-Space expo at National Harbor, Maryland.

The IFC-4 hardware and software configuration introduces a signals intelligence capability to the Triton. It will enable the Triton to become an integral part of the Navy’s Maritime Intelligence, Surveillance, Reconnaissance and Targeting (MISR&T) transition plan. As such, it will eventually replace the Navy’s EP-3E Orion electronic reconnaissance aircraft beginning in the fall of 2023 when the first full orbit is established. The IFC-4 upgrade also includes the Minotaur mission system now used on the EP-3E.

Mackin said the Navy expects to introduce artificial

intelligence and machine learning capabilities during later upgrades. Other upgrades planned for 2025 include Wideband Tactical Targeting Network Technology, enhanced radar identification modes, protected satellite communications. M-Code and counter-electronic attack.

Upgrades planned for 2027-2028 include enhancements to enable the Triton to perform without access to the GPS and satellite communications. These include command from afloat units, more robust navigation and communications, increased power, among others.

Mackin said that when the IFC-4 configuration joins the fleet, the mission control centers will be modified with special compartmented intelligence facilities for protection of intelligence and its sources and methods.

The Royal Australian Air Force (RAAF) is partnered with the U.S. Navy on the Triton program and has accelerated its acquisition of three MQ-4Cs to keep the production line going during the U.S. gap in production, said Doug Shaffer, Northrop Grumman’s’ Triton program manager.

Mackin said the RAAF Tritons will be in the IFC-4 configuration and will be identical to those of the U.S. Navy.