Lockheed Martin Tactical Reconnaissance Radar Begins Test Flights Aboard Predator B 'MQ-9' Unmanned Aerial System

First Flight of a Penetrating Synthetic Aperture Radar on a Fixed Wing Unmanned System

WASHINGTON, Oct. 27 /PRNewswire/ -- A milestone has been achieved, the first flight of Lockheed Martin's (NYSE: LMT) Tactical Reconnaissance and Counter-Concealment-Enabled Radar (TRACER) aboard an MQ-9 Unmanned Aerial System. The milestone also marks the first time a penetrating radar has flown on a fixed wing unmanned aerial system. TRACER, a dual-band synthetic-aperture radar (SAR), detects vehicles, buildings and other man-made objects that are buried, camouflaged or concealed under foliage in real-time. TRACER will continue flight testing and system validation in multiple environments.

TRACER's design is predicated on Lockheed Martin's proven foliage penetration (FOPEN) technology, which incorporates dual-band synthetic aperture radar, and provides high resolution images to ground units in all-weather, day or night conditions, as well as operating in various collection modes. TRACER has already successfully completed approximately one hundred test flights on manned platforms.

"This demonstrates the maturity of penetrating SAR and that TRACER is clearly deployment ready," said Jim Quinn, vice president with Lockheed Martin's Information Systems & Global Solutions-Defense. "When deployed, this "hunting" sensor can use the penetrating RADAR capability to provide ground commanders with intelligence not available from a traditional optical sensor."

The purpose of these test flights is to demonstrate the ability to operate the radar remotely utilizing a high endurance platform. The TRACER configuration aboard the MQ-9 also utilizes an external unpressurized pod to house the RF portion of the system. The tests aboard a NASA-operated Predator B (Ikhana) unmanned aircraft is underway. During the flight testing, the system will collect high resolution SAR imagery. The Ikhana performed as a surrogate for the Army's "Gray Eagle" (MQ-1) unmanned aerial system, which was not available because of current mission critical needs. The flight tests on the Ikhana focused on the radar's performance in the harsh environment of the unpressurized pod, and are intended to mitigate risk for eventual installation on the Army UAS.

TRACER is unique in that it will provide the Army with tactical penetrating radar that is deployable on both manned and unmanned platforms in a variety of environments. The dual band capability of TRACER increases target detection over a variety of terrain and concealment scenarios. TRACER also incorporates data link technology that allows airborne processed results to be down-linked to ground stations immediately. The system includes a portable ground station to plan, collect, support missions, and exploit imagery.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 133,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's 2009 sales from continuing operations were $44.0 billion.

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