Lockheed Martin GPS III Prototype Validates Test Facilities For Future Flight Satellites

Non-Flight Satellite Testbed Also Demonstrates Radio Frequency and Electromagnetic Performance

DENVER, July 10, 2013 /PRNewswire/ -- Lockheed Martin [NYSE: LMT]'s GPS III Non-Flight Satellite Testbed (GNST) has successfully completed a series of high-fidelity pathfinding events which validate the process and facility for vehicle integration checkout, as well as signals interference testing, that the next-generation satellites of the Global Positioning System, known as GPS III, will go through prior to delivery for launch.



The GPS III Non-Flight Satellite Testbed (GNST) completed a series of high-fidelity pathfinding events which validate the process and facility for space vehicle integration checkout.

An innovative investment by U.S. Air Force under the original GPS III development contract, the GNST is a full-sized GPS III satellite prototype which has helped to identify and resolve development issues prior to integration and test of the first GPS III space vehicle (SV 1). Following the Air Force's rigorous "Back-to-Basics" acquisition approach, the GNST has gone through the development, test and production process for the GPS III program first, significantly reducing risk for the flight vehicles, improving production predictability, increasing mission assurance and lowering overall program costs.

During this latest milestone, the GNST successfully completed thermal vacuum (T-Vac) chamber trail blazing, demonstrating facility, mechanical and electrical ground equipment integration, and ran a series of vehicle integration test procedures. The GNST also completed Passive Intermodulation (PIM) and Electromagnetic Compatibility (EMC) testing, which assures that multiple high-powered signals generated from the satellite's navigation downlink transmissions, or transmitted from the hosted nuclear detection system payload on the satellite, do not interfere with each other or themselves.

"As the GNST serves as a pathfinder for the GPS III program, its successful completion of this testing validates that development risks have been retired and our engineering and technology is sound for the flight vehicles being built," explained Keoki Jackson, vice president for Lockheed Martin's Navigation Systems mission area.

The GNST is now being prepared for shipment to Cape Canaveral U.S. Air Force Station, Fla., for more risk reduction activities related to satellite launch.

GPS III is a critically important program for the Air Force, affordably replacing aging GPS satellites in orbit, while improving capability to meet the evolving demands of military, commercial and civilian users. GPS III satellites will deliver three times better accuracy and – to outpace growing global threats that could disrupt GPS service – up to eight times improved anti-jamming signal power for additional resiliency. The GPS III will also include enhancements adding to the spacecraft's design life and a new civil signal designed to be interoperable with international global navigation satellite systems.

Lockheed Martin is currently under contract for production of the first four GPS III satellites (SV 1-4), and has received advanced procurement funding for long-lead components for the fifth, sixth, seventh and eighth satellites (SV 5-8).

The Lockheed Martin team remains on track to deliver the first GPS III satellite, with its enhanced capabilities over current orbiting systems, for launch availability in 2014.

The GPS III team is led by the Global Positioning Systems Directorate at the U.S. Air Force Space and Missile Systems Center. Lockheed Martin is the GPS III prime contractor with teammates ITT Exelis, General Dynamics, Infinity Systems Engineering, Honeywell, ATK and other subcontractors. Air Force Space Command's 2nd Space Operations Squadron (2SOPS), based at Schriever Air Force Base, Colo., manages and operates the GPS constellation for both civil and military users.

Headquartered in Bethesda, Md., Lockheed Martin is a global security and aerospace company that employs about

118,000 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 net sales for 2012 were $47.2 billion.

Note to Editors: GPS III video and high-resolution images are available for download at www.lockheedmartin.com/gps

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