Lockheed Martin Completes Critical Environmental Test On GPS III Pathfinder

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DENVER, Nov. 19, 2012 /PRNewswire/ -- The Lockheed Martin (NYSE: LMT) team developing the U.S. Air Force's next generation Global Positioning System III satellites has completed thermal vacuum testing for the Navigation Payload Element (NPE) of the GPS III Non-Flight Satellite Testbed (GNST). The milestone is one of several environmental tests verifying the navigation payload's quality of workmanship and increased performance compared to the current generation of satellites.

The GPS III program will affordably replace aging GPS satellites, while improving capability to meet the evolving demands of military, commercial and civilian users. GPS III satellites will deliver better accuracy and improved anti-jamming power while enhancing the spacecraft's design life and adding a new civil signal designed to be interoperable with international global navigation satellite systems.

"GPS III satellites have the most advanced navigation payloads ever manufactured. This milestone is a key indicator that we have a solid design and are on track to provide unprecedented position, navigation, and timing capability for GPS users worldwide," said Lt Col Todd Caldwell, the U.S. Air Force's GPS III program manager.

During thermal vacuum testing, the navigation payload's performance was proven in a vacuum environment at the extreme hot and cold temperatures it will experience on orbit to ensure it will operate as planned once in space. Following the test, the NPE will now be integrated with the GNST for final satellite level testing.

The GNST is a full-sized prototype of a GPS III satellite used to identify and solve development issues prior to integration and test of the first space vehicle. The approach significantly reduces risk, improves production predictability, increases mission assurance and lowers overall program costs. Following integration and test at Lockheed Martin's GPS Processing Facility (GPF) near Denver, the GNST will be shipped to Cape Canaveral Air Force Station, Fla., for risk reduction activities at the launch site.

"The completion of thermal vacuum testing on our first navigation payload is a critical milestone for our program that demonstrates we are on a solid path to meet our commitments," said Keoki Jackson, vice president of Lockheed Martin's Navigation Systems mission area. "The Air Force's early investment in our GPS III pathfinder is now paying off and will enable highly efficient and affordable satellite production going forward."

Lockheed Martin is on contract to deliver the first four GPS III satellites for launch. The Air Force plans to purchase up to 32 GPS III satellites.

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 120,000 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 2011 were $46.5 billion.

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

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