Seventh Modernized GPS Satellite Built By Lockheed Martin Successfully Launched From Cape Canaveral

Satellite Includes Demonstration Payload for New Third Civil Signal

A Lockheed Martin-built modernized Global Positioning System Block IIR (GPS IIR-M) satellite, equipped with an innovative payload that will provide an on-orbit demonstration of a third civil signal, was successfully launched today from Cape Canaveral Air Force Station, Fla.

Designated GPS IIR-20(M), the satellite is the seventh in a line of eight GPS IIR satellites that Lockheed Martin Navigation Systems, Newtown, Pa., has modernized for its customer, the Global Positioning Systems Wing, Space and Missile Systems Center, Los Angeles Air Force Base, Calif.

Modernized GPS IIR satellites include several features that enhance operations and navigation signal performance for military and civilian GPS users around the globe. In addition, the IIR-20(M) spacecraft includes a new demonstration payload that will transmit a third civil signal located on the L5 frequency (1176.45MHz). The signal will comply with international radio frequency spectrum requirements.

The incorporation of the demonstration payload on the satellite was completed one month ahead of schedule and in less than one year after the Air Force awarded Lockheed Martin a $6-million contract to design, develop and integrate the payload onto a IIR-M spacecraft already built and in storage. Follow-on generations of GPS spacecraft will include an operational L5 signal to improve the accuracy and performance capabilities of the system.

"Working closely with our Air Force partner, and building upon the design capabilities of the IIR-M space vehicle, the team has developed an innovative, low-risk, low-cost demonstration payload that will pave the way for the new operational third civil signal," said Don DeGryse, Lockheed Martin's vice president of Navigation Systems. "We look forward to a successful demonstration of this critical capability and setting another modernized GPS spacecraft into operations as quickly as possible."

Lockheed Martin and its navigation payload provider ITT of Clifton, N.J. designed and built 21 IIR spacecraft and subsequently modernized eight of those spacecraft designated Block IIR-M. Each IIR-M satellite includes a modernized antenna panel that provides increased signal power to receivers on the ground, two new military signals for improved accuracy, enhanced encryption and anti-jamming capabilities for the military, and a second civil signal that will provide users with an open access signal on a different frequency.

The GPS constellation provides critical situational awareness and precision weapon guidance for the military and supports a wide range of civil, scientific and commercial functions - from air traffic control to the Internet - with precision location and timing information. 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 company that employs about 146,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2008 sales of $42.7 billion.

Low- and high-resolution JPEG image files of a GPS IIR-M satellite are available at:

http://www.lockheedmartin.com/products/GPS/

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