# Lockheed Martin-Built GPS Satellites Exceed 100 Years Of Combined On-Orbit Service

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PARIS AIR SHOW -- The US Air Force's fleet of Global Positioning System (GPS) Block IIR and IIR-M satellites, designed and built by Lockheed Martin , has accumulated 100 years of successful on-orbit operations.

The 12 Block IIR and seven IIR-M satellites in service within the overall 30-spacecraft constellation have provided a reliability record of better than 99.9 percent. In over 100 cumulative years of on-orbit life, this translates to less than one minute of unscheduled outage for every month of operational service, an unmatched record of exceptional performance and reliability for GPS users around the globe.

GPS provides essential services including situational awareness and precision weapon guidance for the military. It is also an information resource supporting a wide range of civil, scientific and commercial functions - from air traffic control to the Internet - with precision location and timing information.

"We are proud our partnership with the Air Force in achieving this milestone and providing reliable, high-performance GPS spacecraft that not only help our warfighters achieve their missions with greater speed and effectiveness, but also serve millions of civil users around the globe," said Don DeGryse, Lockheed Martin's Vice President of Navigation Systems. "We look forward to achieving mission success and delivering even greater navigation capabilities as we gear up for the final launch of the GPS IIR(M) spacecraft and progress on the development of GPS III."

Lockheed Martin Space Systems, Newtown, Pa., is the prime contractor for the GPS IIR program. The company designed and built 21 IIR spacecraft for the Global Positioning Systems Wing, Space and Missile Systems Center, Los Angeles Air Force Base, Calif. The final eight spacecraft, designated Block IIR-M, were modernized to enhance operations and navigation signal performance for military and civilian GPS users around the globe. ITT, Clifton, N.J. supplied all 21 navigation payloads for both the IIR and IIR-M spacecraft.

GPS IIR satellites have been delivering improved navigation capabilities to the U.S. military and civil users since the first launch of a IIR satellite on July 23, 1997. The seventh IIR-M satellite, equipped with an innovative demonstration payload for a third civil signal known as L5, was successfully launched on March 24, securing a critical frequency band for the U.S. government.

Based on the navigation user range error, which measures GPS accuracy, the Block IIR and IIR-M satellites enable properly equipped users to determine precise time and velocity, and worldwide latitude, longitude and altitude to within one meter. Air Force Space Command's 2nd Space Operations Squadron (2 SOPS) at Schriever Air Force Base, Colo., manages and operates the GPS constellation for both civil and military users.

Lockheed Martin is also leading a team, which includes ITT and General Dynamics, building the U.S. Air Force's next-generation Global Positioning System, GPS III. The program, which is entering the Critical Design Review phase of development, will improve position, navigation, and timing services for the warfighter and civil users worldwide and provide advanced anti-jam capabilities yielding improved system security, accuracy and reliability. The first launch of a GPS III satellite is projected for 2014.

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.

Media Contact: Steve Tatum, 408-742-7531; e-mail, Stephen.o.tatum@lmco.com

First Call Analyst:
FCMN Contact:

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