

# U.S. Air Force Successfully Launches Upgraded GPS Satellite Built By Lockheed Martin

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CAPE CANAVERAL AIR FORCE STATION, Fla.

A Global Positioning System (GPS) satellite built by Lockheed Martin for the U.S. Air Force, was successfully launched today from Cape Canaveral Air Force Station, Fla. This mission, designated IIR-10, places on orbit a satellite featuring significant performance upgrades, including an advanced antenna panel which will increase power for GPS receivers.

GPS IIR satellites are designed to improve global coverage and increase the overall performance of the GPS constellation. Lockheed Martin has delivered 21 of these satellites to the U.S. Air Force Space and Missile Systems Center, Los Angeles Air Force Base, Calif. There are now nine new-generation GPS IIR spacecraft currently on orbit out of a total GPS constellation of 28 satellites. Eleven more IIR satellites will be launched to sustain the GPS constellation.

"The GPS IIR program is a great example of how teamwork and technology come together to provide a wide range of military and civilian uses for navigation and precision-timing applications, said Dave Podlesney, GPS IIR Program Director, Lockheed Martin Space Systems in Valley Forge, Pa. "We take great pride in achieving mission success for our Air Force customer and look forward to delivering another high performance spacecraft to our men and women in uniform, as well as for civil, scientific, and commercial users around the globe."

The Global Positioning System allows any properly equipped user to determine precise time and velocity and worldwide latitude, longitude and altitude to within a few meters. Although originally designed as a guidance and navigational tool for the military, GPS has proven beneficial in the commercial and civil markets for transportation, surveying and rescue operations.

The GPS IIR satellites are compatible with the current system and provide improved navigation accuracy, achieved by using an ITT Industries payload system. Additionally, increased autonomy and longer spacecraft life are inherent in the Lockheed Martin satellite design.

To bring new capabilities to the GPS constellation, Lockheed Martin is under contract to modernize eight existing GPS IIR spacecraft already built and in storage. These spacecraft, designated GPS IIR-M, will incorporate two new military signals and a second civil signal, thus providing military and civilian users of the navigation system with improved capabilities much sooner than previously envisioned.

GPS modernization is being performed at the Space & Strategic Missiles -- Valley Forge, Pa. facilities and ITT Industries, Clifton, N.J. facilities. The first launch of a GPS IIR-M satellite is scheduled for December 2004. The U.S. Air Force Space and Missile Systems Center, El Segundo, Calif., is the contracting agency.

Lockheed Martin is also leading a team to develop the U.S. Air Force's next generation Global Positioning System satellite, GPS III. The team, which includes Spectrum Astro, Raytheon, ITT, and General Dynamics, is currently preparing for the GPS III Phase A competition.

GPS III will address the challenging military transformational and civil needs across the globe, including advanced anti-jam capabilities, improved system security and accuracy, and reliability. The new satellite system will enhance space-based navigation and performance and set a new world standard for positioning and timing services. The team selected to meet this challenge will provide system and sustaining engineering, satellite development and production, Control Segment upgrades, and continuous research and development for this evolutionary system.

Headquartered in Bethesda, Maryland, Lockheed Martin employs about 130,000 people worldwide and is principally engaged in the research, design, development, manufacture and integration of advanced technology systems, products and services. The Corporation reported 2002 sales of \$26.6 billion.

Low- and high-resolution JPEG image files of GPS IIR satellites are available at:  
[http://lmms.external.lmco.com/photos/military\\_space/](http://lmms.external.lmco.com/photos/military_space/) and click on GPS

For more information about Lockheed Martin Space Systems -- Sunnyvale, see our website at  
<http://lmms.external.lmco.com/>

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