

Seventh Modernised GPS Satellite Successfully Launched



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 on 24 March 2009 from Cape Canaveral Air Force Station (FL, USA).

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

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 USD6-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.