

## **Boeing Delta II Delivers GPS Satellite to Orbit**

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A Boeing [NYSE: BA] Delta II launch vehicle today successfully delivered to orbit a replenishment Block IIR Global Positioning System (GPS) satellite for the U.S. Air Force.

The Delta II rocket carrying the GPS IIR-16 (M) satellite lifted off from Space Launch Complex 17A at Cape Canaveral Air Force Station, Fla., at 2:12 p.m. Eastern time, deploying the satellite to a transfer orbit 68 minutes later.

The Delta II, known as the workhorse of the launch industry in its payload class, has launched all of the GPS IIR satellites. The launch also marked the second GPS mission aboard a Boeing Delta II in less than two months. GPS IIR-15 lifted off from Cape Canaveral on Sept. 25.

"Our Delta team understands the importance GPS satellites play in protecting our military and helping them defend our country," said Dan Collins, vice president and general manager, Boeing Launch Systems. "The Delta II vehicle has a strong record of performance, and I am proud of the team's commitment to mission success and our role in sustaining the GPS constellation."

The Boeing Delta II 7925-9.5 configuration vehicle used for today's mission featured a Boeing first stage booster powered by a Pratt & Whitney Rocketdyne RS-27A main engine and nine Alliant Techsystems (ATK) solid rocket boosters. An Aerojet AJ10-118K engine powered the storable propellant restartable second stage. A Thiokol Star-48B solid rocket motor propelled the third stage prior to spacecraft deployment. The rocket also flew with a nine-and-a-half-foot diameter Boeing payload fairing

A redundant inertial flight control assembly built by L3 Communications Space & Navigation provided guidance and control for the rocket, enabling a precise deployment of the satellite.

GPS IIR-16 (M) is the third of the modernized GPS satellites that feature greater accuracy, increased resistance to interference and enhanced performance for users.

The GPS network supports U.S. military operations conducted from aircraft, ships, land vehicles and by ground personnel. Additional uses include mapping, aerial refueling and rendezvous, geodetic surveys, and search and rescue operations.

GPS provides military and civilian users 3-D position location data in longitude, latitude and elevation as well as precise time and velocity. The satellites orbit the Earth every 12 hours, emitting continuous navigation signals. The signals are so accurate, time can be figured to within one millionth of a second, velocity within a fraction of a mile-per-second and location to within 100 feet.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a \$30.8 billion business. It provides network-centric system solutions to its global military, government, and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance systems; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer; a foremost developer of advanced concepts and technologies; a leading provider of space-based communications; the primary systems integrator for U.S. missile defense; NASA's largest contractor; and a global leader in sustainment solutions and launch services.

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For further information:

Paula Shawa

Boeing Launch Systems

office: (714) 372-1694

[paula.r.shawa@boeing.com](mailto:paula.r.shawa@boeing.com)

Mike Rein

Boeing Florida Operations

office: (321) 264-8580

[michael.j.rein@boeing.com](mailto:michael.j.rein@boeing.com)

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