



Northrop Grumman Proves Concept for New B-2 Satellite Communication System

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Laboratory demo proves design, performance of new company-designed antenna

REDONDO BEACH, Calif., May 15, 2013 /PRNewswire/ -- Northrop Grumman Corporation (NYSE: NOC) has successfully completed a ground demonstration of a communication system that would allow the U.S. Air Force's B-2 stealth bomber to operate with the Advanced Extremely High Frequency (AEHF) satellite network.

(Logo: <http://photos.prnewswire.com/prnh/20121024/LA98563LOGO>)

A photo accompanying this release is available at <http://media.globenewswire.com/noc/mediagallery.html?pkgid=18680>.

The end-to-end tests prove the maturity of the technologies required to begin full-scale development of a new satellite communications system.

Northrop Grumman conducted the demo April 18 at its Space Park facility in Redondo Beach. It included a prototype active electronically scanned array (AESA) antenna developed by the company, a government-furnished Navy Multi-band Terminal and an AEHF engineering model payload.

Northrop Grumman is the Air Force's prime contractor for the B-2, the flagship of the nation's long-range strike arsenal, and one of the world's most survivable aircraft.

"Our tests suggest that once a B-2 is equipped with our new antenna and an extremely high frequency [EHF] radio, communication will occur accurately and securely with the AEHF satellite network during all phases of the aircraft's mission," said Maria Tirabassi, Northrop Grumman's product manager for B-2 EHF antenna systems. "This capability would allow it to operate more effectively in anti-access/area-denial environments."

The company conducted the tests at EHF frequencies using secure transmission techniques, added Tirabassi. Her test team plans to repeat the laboratory demos in the near future using other B-2 satellite terminal candidates, including a government-furnished Family of Beyond Line-of-Sight Terminal.

The AEHF engineering model payload is representative of EHF satellite payloads currently on orbit. It is used by the U.S. Air Force, Navy and Army to test new EHF satellite terminals prior to testing them with operational satellites.

Earlier this year, Northrop Grumman validated the performance of the AESA antenna on instrumented test ranges. The tests verified the antenna's performance over its entire transmit and receive frequency band, and over its required range of scan angles. The AESA antenna will allow the B-2 to send and receive battlefield information at data rates significantly faster than its current satellite communications system.

Following completion of the current AEHF laboratory demos, Northrop Grumman plans to demonstrate the ability of the AESA antenna and a terminal to communicate directly "over the air" with an operational AEHF satellite.

The B-2 is the only long-range, large-payload U.S. aircraft that can penetrate deeply into access-denied airspace, and the only combat-proven stealth platform in the current U.S. inventory. In concert with the Air Force's air superiority fleet, which provides airspace control, and the Air Force's tanker fleet, which enables global mobility, the B-2 can help protect U.S. interests anywhere in the world. It can fly more than 6,000 nautical miles unrefueled and more than 10,000 nautical miles with just one aerial refueling, giving it the ability to reach any point on the globe within hours.

The latest B-2 product news and information from Northrop Grumman is available at <http://www.northropgrumman.com/Capabilities/B2SpiritBomber>.

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