



## Northrop Grumman's Astro Aerospace Delivers Antennas For Next-Generation GPS III Satellites 3 through 6

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CARPINTERIA, Calif., March 12, 2014 /PRNewswire/ -- Continuing its support for the U.S. Air Force's Global Positioning System (GPS), Northrop Grumman Corporation (NYSE: NOC) has delivered 32 self-deploying, monopole JIB antennas for the third, fourth, fifth and sixth GPS III satellites.

***NORTHROP GRUMMAN***

Photos accompanying this release are available at  
<http://media.globenewswire.com/noc/mediagallery.html?pkgid=24084>

The company's Astro Aerospace strategic business unit delivered the antennas to Lockheed Martin, which leads the industry team developing GPS III satellites in Littleton, Colo. Once installed, eight JIB antennas on each GPS III satellite will deploy to form an RF antenna array.

This is the delivery of the first 32 antennas supporting the third through sixth GPS III space vehicles out of 48 total antennas on order for GPS III space vehicles three through eight. Sixteen more JIB antennas will be delivered in early 2014, according to Dan Johansen, Astro Aerospace Program Manager.

"Astro Aerospace has delivered more than 1,000 JIB assemblies altogether for GPS IIF, GPS IIR and GPS III spacecraft, all with a 100 percent on orbit success rate," said Johansen. "The antennas we supply are designed to help Lockheed Martin and the Air Force meet affordability and mission assurance goals for the next generation of GPS satellites."

The GPS III program will affordably replace aging GPS satellites, while improving capability to meet the evolving demands of military, commercial and civilian users. GPS III satellites will deliver three times better accuracy; provide up to eight times improved anti-jamming capabilities; and include enhancements which extend spacecraft life 25 percent further than the prior GPS block. The GPS III also will carry a new civil signal designed to be interoperable with other international global navigation satellite systems, enhancing civilian user connectivity.

The JIB antenna is a stored energy monopole that deploys typically in 200 milliseconds. The stowed package is one of the smallest available and most compact for a deployable antenna of a given size. The unit is adaptable and comes in diameters from 0.25" up to 2" for impedance matching and in lengths from 12 inches to 25 feet.

Astro Aerospace, a pioneer of space deployable structure technologies, has a perfect record of on-orbit deployments since it was founded in 1958. Having delivered hardware for hundreds of spaceflight missions, it operates under the Aerospace Products group that offers a broad set of mature, proven and affordable products and services. For additional information about Astro Aerospace please visit [www.northropgrumman.com/AerospaceProducts](http://www.northropgrumman.com/AerospaceProducts)

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