

Boeing Orbital Express to Demonstrate New On-Orbit Servicing Capability

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A Boeing-led [NYSE: BA] industry team today announced the successful launch of Orbital Express, a demonstration spacecraft that is part of a Defense Advanced Research Projects Agency (DARPA) program aimed at demonstrating fully autonomous on-orbit spacecraft servicing capabilities.

Liftoff occurred yesterday at 10:10 p.m. EST from Space Launch Complex 41, Cape Canaveral Air Force Station, Fla. Following a nominal flight, the United Launch Alliance Atlas V rocket deployed the spacecraft to a low-Earth orbit.

The three-month mission will demonstrate various functions of the new system.

"Orbital Express is a revolutionary system that will offer customers with appropriately configured on-orbit assets new options to enhance the operation of their systems," said George Muellner, president of Boeing Advanced Systems. "This demonstration mission is the first step toward developing an operational system that can service satellites and support other space operations. Orbital Express continues our success in delivering solutions that shape new markets through the integration of people, innovation and technology."

Orbital Express consists of the Autonomous Space Transport Robotic Operations (ASTRO) servicing spacecraft developed by Boeing Advanced Network and Space Systems; and NextSat, a prototypical modular next-generation serviceable client spacecraft developed by Ball Aerospace.

The demonstration mission will validate capabilities critical for the development of emerging and future space systems. When operational, the new integrated rendezvous proximity operations and capture system will provide satellite and spacecraft operators with a routine on-orbit servicing capability for such things as fuel and component transfer, relocation, inspection, safe de-orbit and on-orbit assembly.

Major test objectives include:

- Autonomous operations, including rendezvous from 7 km with a capability to support rendezvous at separation distances up to 1,000 km and beyond
- Onboard relative navigation and guidance systems
- Robotic arm system
- Multiple captures of the NextSat client spacecraft performed directly and using the robotic arm
- Sub-meter range autonomous station-keeping
- Fluid and component transfer
- Passive, targetless rendezvous sensor systems

"Today's launch is a major milestone for the Orbital Express program," said Alex Lopez, vice president, Boeing Advanced Network and Space Systems. "Our team has worked very hard to prepare for this important mission, and I congratulate them on their accomplishment. We're looking forward to a successful demonstration for our customer and moving forward with developing and deploying the first operational system."

DARPA selected Boeing as the prime integrator for Phase II of the Orbital Express Advanced Technology Demonstration program in March 2002.

Orbital Express team members include NASA, Ball Aerospace, Northrop Grumman Space Technology, MacDonald, Dettwiler and Associates Ltd., the Charles Stark Draper Laboratory Inc., and Starsys Research.

Additional Orbital Express information, including mission updates, can be found at:

http://www.boeing.com/ids/advanced_systems/orbital.html.

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