Boeing Orbital Express Completes First Autonomous Free Flight and Capture

The Boeing [NYSE: BA] Orbital Express system has completed another industry first by successfully performing a fully autonomous free-flight rendezvous and capture operation. The demonstration of the two-spacecraft system is part of an ongoing Defense Advanced Research Projects Agency (DARPA) mission to validate on-orbit servicing capabilities.

Using its onboard cameras and advanced video guidance system, the Boeing Autonomous Space Transport Robotic Operations (ASTRO) servicing spacecraft separated from the NextSat client spacecraft, backed away to a distance of 10 meters (33 feet), maintained proximity flight with NextSat for a full orbit, and then approached and captured NextSat with its docking mechanism.

The demonstration occurred at full spacecraft autonomy to mark the first on-orbit rendezvous and capture operation performed with no active exchange of relative navigation information or any intervention or control from the ground.

"This successful demonstration is a critical milestone for the Orbital Express program," said Alex Lopez, vice president of Boeing Advanced Network and Space Systems. "On-orbit proximity and rendezvous capability is required to service satellites. Satellite servicing capability can reduce operations costs, increase spacecraft life and enable new space system architectures."

"It was impressive to watch this historic event," said Bob Friend, Boeing Orbital Express program manager and chief systems engineer. "With a single command to start the scenario, ASTRO performed all subsequent operations from de-mate through final capture and mate. I am extremely proud of the entire team on this accomplishment."

During the next major unmated operation (Scenario 3-1), ASTRO will depart NextSat to a range of 30 meters (98 feet), then approach and perform a free flight capture of NextSat using its robotic arm.

The Orbital Express program is a DARPA-led effort to validate technologies required to perform on-orbit satellite servicing. 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.

Orbital Express mission information and demonstration updates can be found at:http://www.boeing.com/orbitalexpress.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses specializing in innovative and capabilities-driven customer solutions. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $32.4 billion business with 72,000 employees worldwide.
###

For further information:
Robert Villanueva
Boeing Advanced Systems
(562) 496-5688
robert.s.villanueva@boeing.com