Boeing-Built X-37B Spaceplane Set for Eighth Mission

- Launch is set for no earlier than August 21 from Florida Space Coast

- Orbital Test Vehicle will fly a service module, expanding capacity for a laser communications demonstration, and highest performing quantum inertial sensor ever used in space

KENNEDY SPACE CENTER, Fla., July 28, 2025 /PRNewswire/ -- The Boeing [NYSE: BA]-built X-37B Orbital Test Vehicle (OTV) is preparing to launch its eighth mission (OTV-8) from Florida's Space Coast, with liftoff scheduled no earlier thanAugust 21. This milestone comes less than six months after the successful completion of OTV-7.

"With each successive flight, the X-37B has demonstrated adaptability and flexibility by hosting diverse experiments and pioneering new orbital regimes," said Michelle Parker, vice president of Boeing Space Mission Systems. "This mission continues that legacy by fielding cutting-edge technologies that advance our nation's space capability and improve the resilience of future architectures."

OTV-8 will fly with a service module, expanding capacity for experiments and opening new opportunities for mission partners, which include the Air Force Research Laboratory and the Defense Innovation Unit.

The mission will host demonstrations of high-bandwidth inter-satellite laser communications technologies, as well as the highest performing quantum inertial sensor ever tested in space. The U.S. Space Force will leverage insights from this mission to inform future space architectures.

"OTV-8's laser communications demonstration will mark an important step in the U.S. Space Force's ability to leverage commercial space networks as part of proliferated, diversified, and redundant space architectures," said U.S. Space Force Chief of Space Operations, Gen. Chance Saltzman. "In so doing, it will strengthen the resilience, reliability, adaptability, and data transport speeds of our satellite communications architectures."

The revolutionary quantum inertial sensor will demonstrate precise positioning, navigation and timing in a GPS-denied environment. Quantum inertial sensors, useful for navigation in deep and cis-lunar space, promise to push the technological frontiers of long-distance space travel and exploration.

"OTV 8's quantum inertial sensor demonstration is a welcome step forward for the operational resilience of Guardians in space," said Space Delta 9 Commander Colonel Ramsey Hom. "Whether navigating beyond Earth-based orbits in cis-lunar space or operating in GPS-denied environments, quantum inertial sensing allows for robust navigation capabilities where GPS navigation is not possible. Ultimately, this technology contributes significantly to our thrust within the Fifth Space Operations Squadron and across the Space Force guaranteeing movement and maneuverability even in GPS-denied environments."

Boeing and Space Force teams are preparing the spaceplane for launch at Boeing's facility atKennedy Space Center, Florida. Since its inaugural launch in April 2010, the spaceplane has spent more than 4,200 days in space.

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