Boeing Airborne Laser Team Fires High-Energy Laser in Flight

EDWARDS AIR FORCE BASE, Calif., Aug. 20, 2009-- The Boeing Company [NYSE: BA], industry teammates and the U.S. Missile Defense Agency on Aug. 18 successfully fired the high-energy laser aboard the Airborne Laser (ABL) aircraft in flight for the first time, moving closer toward ABL's upcoming missile shoot-down demonstration.

During the test, the modified Boeing 747-400F aircraft took off from Edwards Air Force Base and fired its high-energy laser while flying over the California High Desert. The laser was fired into an onboard calorimeter, which captured the beam and measured its power.

"This was a significant test of the Airborne Laser's capabilities, demonstrating that the system has truly moved from the drawing board to reality," said Greg Hyslop, vice president and general manager of Boeing Missile Defense Systems. "We have seen that the Airborne Laser's high-energy laser is functioning aboard the aircraft and that ABL is ready for more flight tests to further validate its viability as a mobile missile defense system."

Michael Rinn, Boeing vice president and ABL program director, said, "This test shows that ABL is on track to shoot down a boosting ballistic missile later this year. After years of development, the team is excited to be so close to delivering this transformational and unique directed-energy weapon system. We think ABL will be a game-changer for weapon systems the same way stealth technology transformed aerial combat."

Before the upcoming missile shoot-down demonstration, ABL's high-energy laser will undergo a series of additional flight tests, building toward lethal capabilities. It will advance from being fired into the onboard calorimeter to being sent through the beam control/fire control system, exiting the aircraft through a nose-mounted turret. This will represent a major achievement in directed-energy technology because it will be the first time a megawatt-class laser has been coupled with precise pointing and atmospheric correction in an airborne environment. The team will follow this milestone with the firing of the high-energy laser against a variety of increasingly challenging targets, culminating with an airborne intercept test against a ballistic missile in the boost phase of flight.

ABL returned to flight in April, following integration and ground testing of the high-energy laser aboard the aircraft at Edwards. The team on Aug. 10 engaged an instrumented boosting missile with a low-power, atmosphere-compensated laser beam. ABL's development history includes numerous flight tests in 2007 that demonstrated its ability to track an airborne target, measure and compensate for atmospheric conditions, and deliver a surrogate high-energy laser's simulated lethal beam on a target. In September 2008, the team fired the high-energy laser aboard the aircraft in ground testing for the first time.

Boeing is the prime contractor for ABL, which is designed to provide unprecedented speed-of-light capability to destroy all classes of ballistic missiles in their boost phase of flight. In addition, Boeing is using internal investments to examine directed energy's potential to address several other critical missions, including defending against aircraft, cruise missiles and surface-to-air missiles.

Northrop Grumman designed and built ABL's high-energy laser. Lockheed Martin developed the weapon system's beam control/fire control system, and Boeing provided the battle management system.

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, and the world's largest and most versatile manufacturer of military aircraft. Headquartered in St. Louis, Boeing Integrated Defense Systems is a $32 billion business with 70,000 employees worldwide.

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