

## **Airborne Laser Completes Laser Ground Tests**

---

### **Airborne Laser Completes Laser Ground Tests**

The Boeing-led [NYSE: BA] Airborne Laser team announced today the successful completion of a series of tests involving its high energy laser at the Systems Integration Lab at Edwards Air Force Base, Calif. During this test series, lasing duration and power were demonstrated at levels suitable for the destruction of multiple classes of ballistic missiles. This is the second of two program significant knowledge points planned for 2005.

Airborne Laser's (ABL) megawatt-class Chemical Oxygen Iodine Laser (COIL) is designed and built by Northrop Grumman Corporation (NYSE: NOC). Lasing tests included more than 70 separate lasing events. The laser has been operated at simulated altitude, and achieved steady state operations under full optical control.

In July 2005, the ABL team completed the year's first knowledge point, which was flight testing of the system's passive mission payload at Edwards Air Force Base. During those tests, the team demonstrated the stability and alignment of the two Beam Control and Fire Control optical benches with the turret. That test also demonstrated the system's pointing and vibration control functions, as well as its ability to acquire targets as directed by the battle management segment.

With the completion of the above milestones for 2005, the program now proceeds to integrated systems testing. The ABL YAL-1A aircraft has transitioned to Boeing's Wichita facility to undergo final aircraft modifications for installation of the High Energy Laser modules and to begin Low Power System Integration-Active ground and flight testing. During active testing, the kilowatt-class illuminator lasers will be integrated and tested to demonstrate target acquisition, fine tracking, pointing and atmospheric compensation. Upon completion of active testing, the YAL-1 will return to Edwards Air Force Base for installation of the High Energy Laser, which will be removed from the System Integration Laboratory. This will be followed by extensive weapon systems testing on the aircraft -- both ground and flight.

"This is a major technological achievement for the Airborne Laser program," said Pat Shanahan, vice president and general manager of Boeing Missile Defense Systems. "Proving the capability of this laser to operate at lethal levels of power and duration moves the system a major step closer to becoming a vital component of the nation's boost phase defense against a ballistic missile threat. We have made continued steady progress on this program breaking new technological ground every day, with each test increment leading to the lethal shoot down milestone."

The ABL consists of a megawatt-class, high-energy Chemical Oxygen Iodine Laser placed on a Boeing 747-400 aircraft. ABL is a key component of the Missile Defense Agency's overall ballistic missile defense architecture. In operation, the ABL's sensor system will autonomously detect and track an enemy's boosting missile, determine its position and destroy it with the high energy laser. The ABL's sensor system also identifies the launch location and predicts the impact location, which is communicated to other elements in the missile defense architecture.

Boeing provides the modified aircraft and battle management segments and is the weapon system integrator. ABL partners include Northrop Grumman, which provides the laser segment, as well as the Beacon Illuminator. Northrop Grumman is the world's leading developer of mega-watt class COIL lasers. Lockheed Martin (NYSE: LMT) is the third partner and provides the beam control / fire control segment which contains state-of-the-art optics for control of the solid state illuminators for tracking and atmospheric compensation as well as the High Energy Laser. Lockheed also provides ABL's flight turret assembly.

A unit of The Boeing Company, Boeing Integrated Defense Systems is one of the world's largest space and defense businesses. Headquartered in St. Louis, Boeing Integrated Defense Systems is a \$30.5 billion business. It provides network-centric system solutions to its global military, government, and commercial customers. It is a leading provider of intelligence, surveillance and reconnaissance systems; the world's largest military aircraft manufacturer; the world's largest satellite manufacturer and a leading provider of space-based communications; the primary systems integrator for U.S. missile defense; NASA's largest contractor; and a global leader in sustainment solutions and launch services.

###

For further information:

Maria McCullough

Boeing Missile Defense Systems

703- 414-6158

[maria.mccullough@boeing.com](mailto:maria.mccullough@boeing.com)

Ken Englade

Missile Defense Agency

505- 846-7681

[ken.englade@mda.mil](mailto:ken.englade@mda.mil)

---