ABL Testing Boosts Confidence in Ability to Shoot Down Ballistic Missiles

Air Force Lt. Gen. Henry “Trey” Obering III, director of the Missile Defense Agency (MDA), said today that the Airborne Laser’s (ABL) megawatt-class chemical laser had successfully completed its 2005 “Knowledge Point” of firing long enough with sufficient power to prove it is technically capable of destroying boost-phase ballistic missiles.

Since the series of tests began on Nov. 10, 2004, the Chemical Oxygen Iodine Laser (COIL) has been fired more than 70 times, beginning with a burst of a fraction of a second and increasing until a firing on Dec. 6 exceeded the full duration goal at a level that is believed to be capable of destroying a ballistic missile during its boost phase, or within the first few minutes after it is launched.

Although the precise duration was not announced for security reasons, the firing time surpassed goal ABL engineers wanted to reach to achieve the second MDA Knowledge Point for the year.

On Aug. 1, MDA announced the successful completion of the first Knowledge Point – the conclusion of an eight-month long series of flight tests of the ABL aircraft, YAL-1A, which demonstrated the performance of the ABL’s sophisticated battle management and beam control/fire control systems.

The ABL COIL is composed of six interconnected modules, each as large as a sport utility vehicle turned on end. Each module weighs about 6,500 pounds and has 3,600 separate parts. When fired through a window in the aircraft’s nose turret, it produces enough energy in a five-second burst to power a typical household for more than one hour.

Currently, the aircraft is undergoing modifications to its aft section at the Boeing facility in Wichita, Kan., readying it for installation of the COIL beginning in 2006. Following a lengthy series of ground and air tests of all its complicated systems, ABL will begin additional testing that will include the planned intercept of a ballistic missile target before the end of the decade.
The System Integration Lab (SIL) at Edwards AFB, Calif., where the tests on the Chemical Oxygen Iodine Laser (COIL) were conducted in the interior of the Boeing 747 fuselage, whose nose is protruding through the metal wall. USAF Photo.

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