MISSILE DEFENSE AGENCY

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Airborne Laser Achieves "First Light"

The U.S. Missile Defense Agency (MDA) announced today that it completed a test on November 10 that successfully fired all six modules of the megawatt-class Chemical Oxygen Iodine Laser (COIL) for the Airborne Laser, a landmark achievement in the development of a directed energy system that will be mounted aboard a modified Boeing 747 aircraft and when deployed will provide a capability to destroy a hostile ballistic missile soon after it is launched, in the "boost" phase of flight.

The test, internally called "First Light," lasted only a fraction of a second and was conducted in a special laser research, development and testing facility in the ABL section of Edwards Air Force Base, Calif. It was the first time that multiple modules of the powerful laser had ever been fired while linked together as a single unit.

In the test, the laser light produced by the six modules was fired into a wall of metal called a calorimeter or beam dump. The temperature rise of the metal was used to validate that laser power was generated.

While the COIL lasers were being tested in the special lab, the ABL aircraft, YAL-1A, was parked nearby preparing for its own major test – a return to flight for the first time in almost two years. It was taken out of service in December 2002 for modifications to the airframe and the installation of the complex laser beam control system.

Initially, only the passive sensors of the beam control system will be tested. The ABL Track Illuminator Laser (TILL) and Beacon Illuminator Laser (BILL) will be installed early next year and the full beam control system will be tested in flight.

After completion of additional tests, the COIL will be installed on the flight test aircraft. Ground and flight tests of ABL will continue, and planning is now underway to incorporate the laser system in a test that will include shooting down a ballistic missile over the Pacific Ocean. No date has been set for the test.

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