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Airborne Laser Completes Successful Fire Control Loop for Missile Engagement Sequence

Lt. General Henry A. "Trey" Obering, Missile Defense Agency director, announced today the successful completion of the basic steps required to complete a fire control loop (sequence of events) to engage a boosting ballistic missile for the Airborne Laser (ABL) aircraft during flight tests conducted on June 29, 2007.

The exercise included the first in-flight propagation of the Surrogate High Energy Laser (SHEL) through the nose-mounted turret of the ABL aircraft, a boost-phase missile defense system that is designed to use directed energy to destroy a ballistic missile in the boost phase of flight. During the test, the modified Boeing 747-400 freighter first used its infrared sensors and beam control sensors to successfully find and track Big Crow, the target aircraft used for the test. On this initial test of the SHEL, ABL made use of beacon lasers installed on Big Crow to simulate the targeting return it would receive from a live missile target. The SHEL is a low-power laser used to simulate the characteristics of the high-energy Chemical Oxygen Iodine Laser that will be installed on ABL beginning later this year. The high-power laser has completed more than 70 successful firings during ground testing.

Completing the basic fire control process of an engagement sequence marks a significant step in the rapid technical and engineering progress achieved by the ABL program over the past three years.

In subsequent tests planned for later this month, the ABL will conduct a complete engagement series using its tracking illuminator laser, its atmospheric compensation laser, and the SHEL.

The SHEL was installed on the ABL aircraft during aircraft ground modifications and is an important component to test ABL's ability to compensate for atmospheric distortions and deliver sufficient power on target to destroy a boosting ballistic missile shortly after it is launched.

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