7100 Defense Pentagon Washington, DC 20301-7100

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Alpha / LAMP Integration Test

The Ballistic Missile Defense Organization announced today another successful test involving the Alpha Laser and a four-meter beam expansion telescope (called LAMP). The test demonstrated closed loop control of jitter on the high power beam. This was achieved by sampling the high power beam reflected from the four-meter primary mirror, analyzing the wavefront and then compensating for jitter using a fast steering mirror in the beam control section of the optical train. The test was conducted by Lockheed Martin Astronautics and TRW at TRW's laser test facility near San Juan Capistrano, California.

The next high power closed loop test, scheduled for later this year, is designed to correct both jitter and wavefront phase errors using a fast steering mirror and a deformable mirror in the beam control subsystem.

These tests are designed to demonstrate that a high power laser beam can be shaped, expanded and precisely pointed to the levels required to destroy ballistic missile targets at long ranges in space.