Backgrounder

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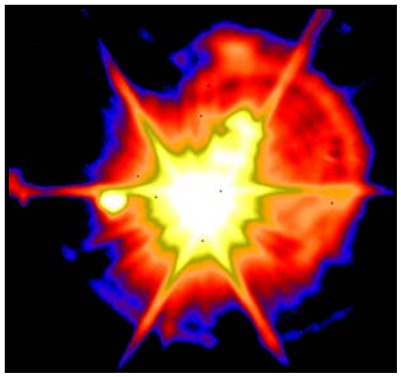

Ground-based Midcourse Defense

Description & Purpose: An element of the Ballistic Missile Defense System, Ground-based Midcourse Defense (GMD) provides the United States the capability to engage and destroy long-range ballistic missiles.

Customer: The U.S. Missile Defense Agency

Characteristics:

- 24/7/365 operational capability
- Uses multiple land, sea and space-based sensors to detect and track missile threats early during their boost phase.
- Launches three-stage solid booster Ground-Based Interceptors equipped with an Exo-atmospheric Kill Vehicle (EKV) toward the target's predicted location in space. Outside the earth's atmosphere, the EKV destroys the target warhead using only the kinetic force of direct collision.
- Employs a comprehensive ground systems network, including redundant fire control nodes, interceptor launch facilities and a complex communications network for planning, directing and controlling GMD.

GMD Industry Team:
As prime contractor since 1998, Boeing has partnered with the U.S. Missile Defense Agency in the design, development, integration, test and sustainment of all GMD components. Key subcontractors include:

- Raytheon: Kill vehicles, radars
- Northrop Grumman: Fire Control and Communications products
- Orbital Sciences Corporation: Booster vehicles

Performance:
Extensive ground and flight tests have demonstrated the system's successful performance against long-range ballistic missile targets. The system has achieved a total of eight successful intercept tests, including three successful intercept tests with the operationally configured interceptor. In addition, Boeing continues development of the two-stage interceptor in order to provide a hedge against the long range ballistic missile threat. Boeing and MDA have executed a successful two-stage launch, fly-out and data collection mission.

Background: GMD has been in development since 1998 and incorporates decades of research, development, test and evaluation on proven “hit-to-kill” and other advanced technologies.

In the fall of 2004, just two and a half years after the presidential directive to build a U.S. missile defense capability, the Boeing GMD team began fielding ground-based interceptors at Ft. Greely, Alaska, and Vandenberg Air Force Base, Calif.

There are currently over 20 interceptors fielded and the program continues to field additional interceptors and to integrate additional sensors into the GMD system. GMD system elements reach across 12 time zones and are linked by over 20,000 miles of fiber optic cable.

Under rigorous testing, the GMD system has demonstrated impressive capabilities, including the ability to shoot down an incoming ballistic missile. The system has achieved a total of eight successful intercept tests, including three successful intercept tests with the operationally configured interceptor. Flight testing is scheduled to continue.

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February 2011