



Kinetic Energy Interceptors

The Kinetic Energy Interceptors program's mission is to provide the Ballistic Missile Defense System a strategically deployable, tactically mobile land and sea-based capability to defeat medium to long-range ballistic missiles during the boost, ascent, and midcourse phases of flight. The Kinetic Energy Interceptors weapon system has the potential capacity to be deployed as an element of the integrated Ballistic Missile Defense System in three configurations: land-mobile, sea-mobile, and land-fixed. These multiple deployment configurations increase engagement opportunities, enhance the Ballistic Missile Defense System's layered defensive capability, and decrease life-cycle operation costs by leveraging common sub-components across the three deployed configurations.



Overview

The Kinetic Energy Interceptors weapon system is comprised of three major components: a missile launcher; a fire control and communications unit; and a high acceleration interceptor that delivers payloads capable of destroying adversary ballistic missiles and their lethal payloads using kinetic energy.

Details

- The Kinetic Energy Interceptors destroy ballistic missiles in the boost, ascent, or midcourse phases of flight.
- During boost or ascent phase intercepts, the interceptor's payload acquires, homes, and kinetically destroys a hot-burning threat ballistic missile prior to deployment of its lethal payload, decoys, and countermeasures.
- For midcourse phase intercepts, the interceptor's payload acquires, discriminates the missile's deployed lethal payload from accompanying decoys, countermeasures and exhausted boost motors, and then autonomously homes in, and kinetically destroys the lethal payload.
- The Kinetic Energy Interceptors weapon system's mobility enables rapid deployment near an adversary's launch sites and subsequent early battle-space engagements of the adversary's ballistic missile in the boost, ascent, and early midcourse phases of flight.
- Mobility provides the operational flexibility to respond to changing adversary conditions (countries, countermeasures, and tactics) and mitigates an adversary's capability to exploit our fixed-site ballistic missile defense weapon systems.
- The Kinetic Energy Interceptors fire control component interfaces with the Ballistic Missile Defense System command and control element, Ballistic Missile Defense System sensors and other overhead sensors to obtain threat tracking data.

Development

- Focus on interceptor development and preparations for mobile capability development
- Focus on booster flight in 2009 as the final demonstration of readiness to proceed with the overall development and test program