



# MKV

Multiple Kill Vehicle



### Summary

- Effective and affordable solution to the midcourse threat
- Destroys multiple credible objects – both lethal threats and decoys
- Integrates with all BMDS assets
- Common to multiple basing platforms
- Leverages extensive industrial base experience

### The First Kill Vehicle System Designed to Destroy Multiple Threat Objects With a Single Launch

The ballistic missile threat requires a midcourse kill vehicle that can effectively counter complex threat sets, which may include decoys as well as lethal threat objects. The U.S. has the ability to develop, test and deploy multiple kill vehicles launched on a single interceptor. Such an approach will enable a more effective and affordable solution to counter the emerging threat.

The Multiple Kill Vehicle (MKV) program will demonstrate that multiple intercepts can be achieved with a single interceptor launch and address most threat sets with a single launch. While MKV's initial capability will be ground based, the system design is modular, making it adaptable to multiple basing modes. MKV can add significant robustness to the Ballistic Missile Defense System in the next decade.

### Technical Concept

The MKV system consists of two major subsystems: (1) the Carrier Vehicle (CV) that assesses the threat set, deploys and assigns the Kill Vehicles, manages the engagement and may be utilized as a kill asset; and (2) the Kill Vehicles (KV) that intercept lethal threat objects and credible decoys.

MKV's many-on-many engagement approach significantly increases the probability of successfully intercepting the lethal threat object. It provides a quantum leap in capability, lowering the cost of midcourse intercept engagements and offers an effective near-term response to a variety of anticipated ballistic missile threats and decoys.

The MKV team brings extensive missile defense expertise to the MKV development effort. The team's 30+ years' experience in hit-to-kill technology, sophisticated hardware-in-the-loop testing facilities, high-fidelity simulation capability and unique knowledge of designed-in producibility and production provides the highest probability that the MKV system can be built affordably by the broadened industrial base. The MKV team will deliver an optimized design for the Multiple Kill Vehicle mission.

The MKV program is managed by the Missile Defense Agency with its partners at the U.S. Army Space and Missile Defense Command/ U.S. Army Forces Strategic Command Technical Center.

Successfully completed on schedule:

- MKV Payload Restraint and Dispense Mechanism Tests
- Kill Vehicle Seeker Image Stabilization Tests
- Kill Vehicle Divert and Attitude Control System (DACS) Risk Reduction Tests
- Kill Vehicle Aft Electronics and Structural Development Verification Tests
- MKV System Concept Review



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