Multiple Kill Vehicle Program

Mr. Ralph Drensek
MKV Acquisition Management

DISTRIBUTION STATEMENT: Approved for public release; distribution is unlimited.

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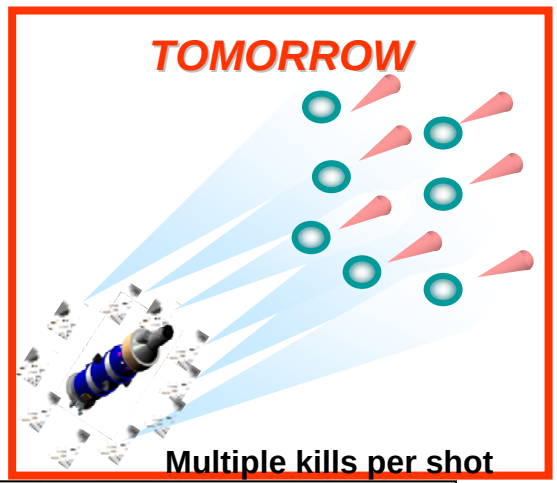
Program Overview

Multiple Kill Vehicle

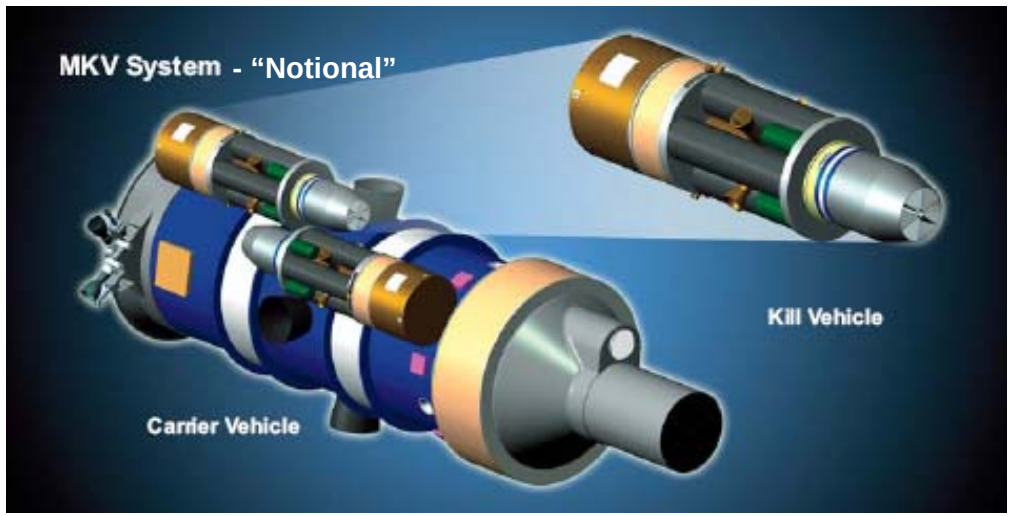
- **The Missile Defense Agency is developing the Multiple Kill Vehicle (MKV) as the current evolution in midcourse missile defense.**
  - **Provides volume kill capability**
  - **Responds to evolving threat**
  - **Offsets discrimination requirements**
  - **Leverages limited launch platforms**



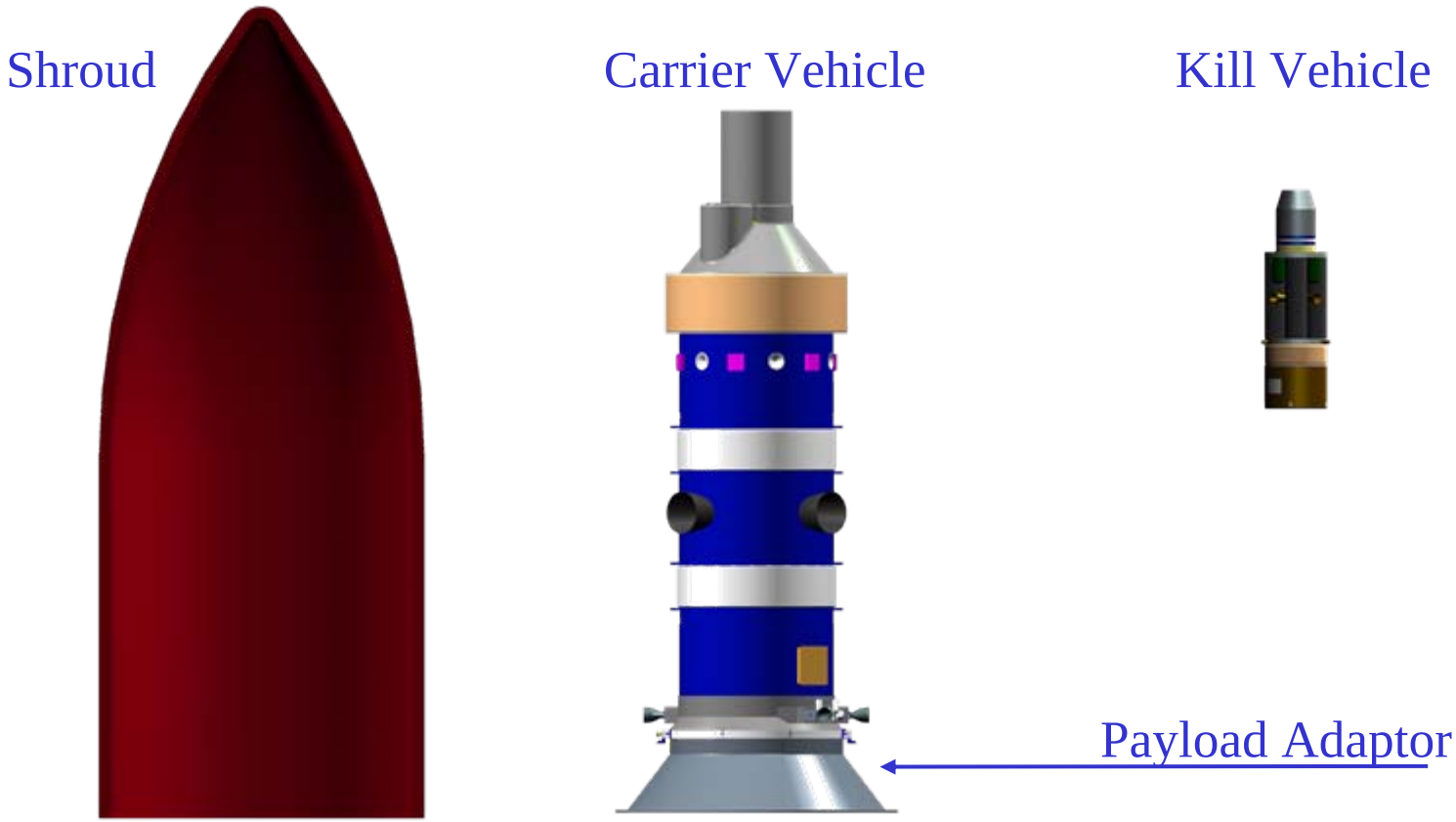
Multiple Kill Vehicle enables a new approach to Midcourse Defense: Discriminate and kill multiple threat objects with a single payload

Development Overview

- **MKV established two parallel development paths**
  - **Maintains two capable sources**
  - **Reduces development risk**
  - **Develops common architecture and standards**
  - **Develops common, modular payload**
  - **Provides capability for both land and sea-basing**



Multiple Kill Vehicle Components



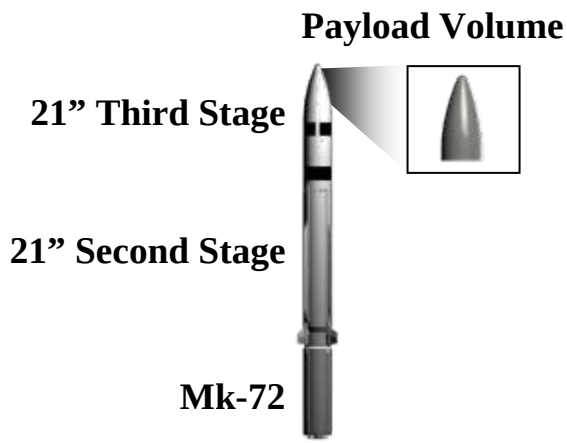
"Notional"

Midcourse Interceptors

Multiple Kill Vehicle

Ground-based Interceptor

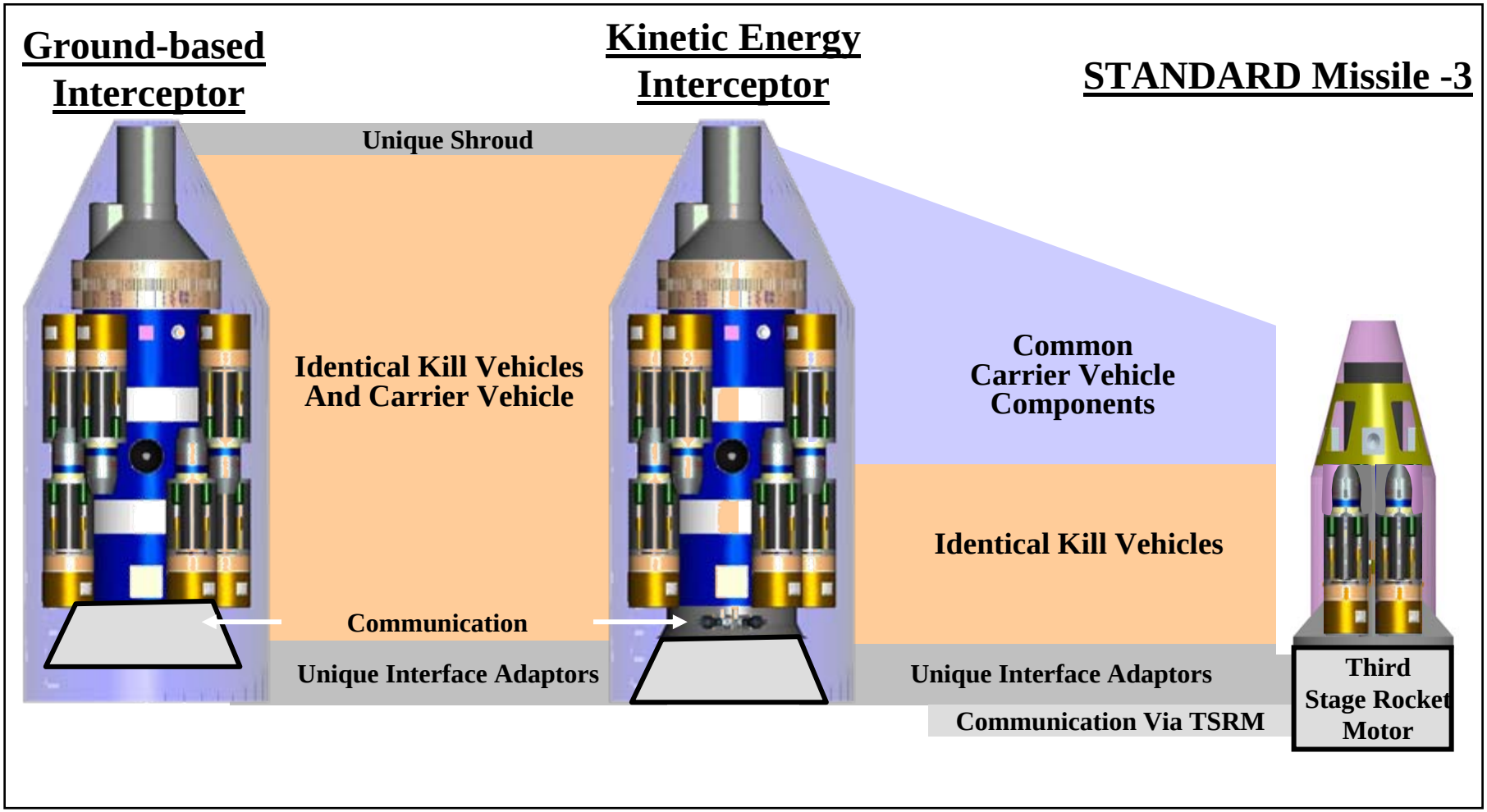
Kinetic Energy Interceptor



Standard Missile-3

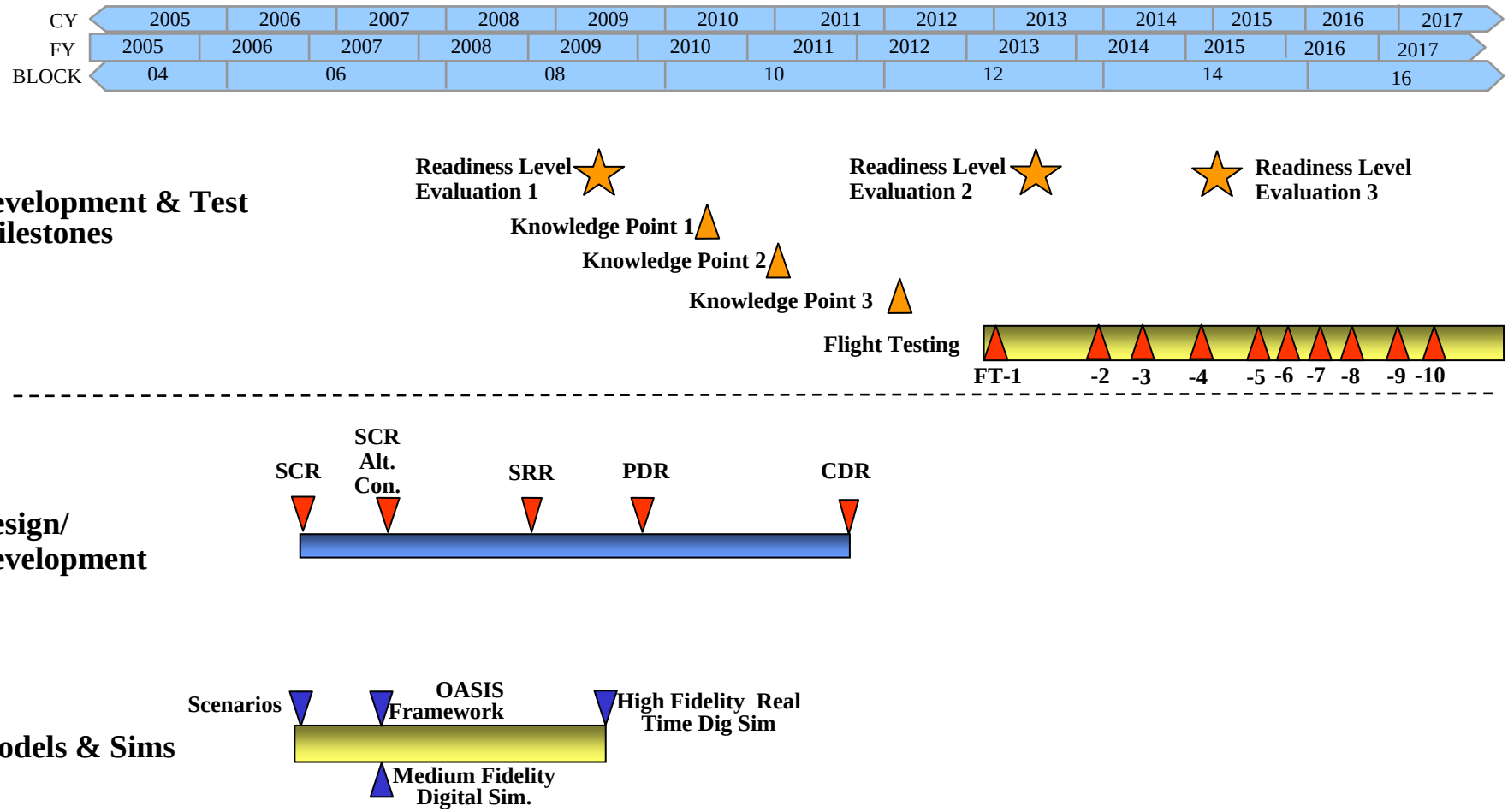
Notional Integration Approach

Multiple Kill Vehicle



Schedule And Description

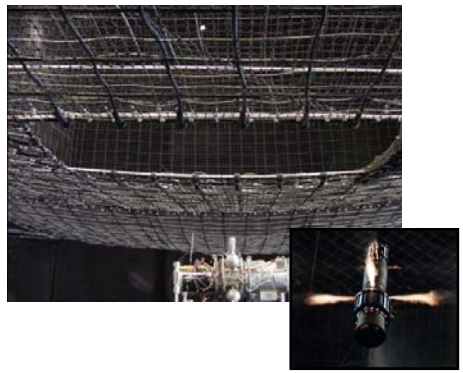
Multiple Kill Vehicle



Component Development and Test

Multiple Kill Vehicle

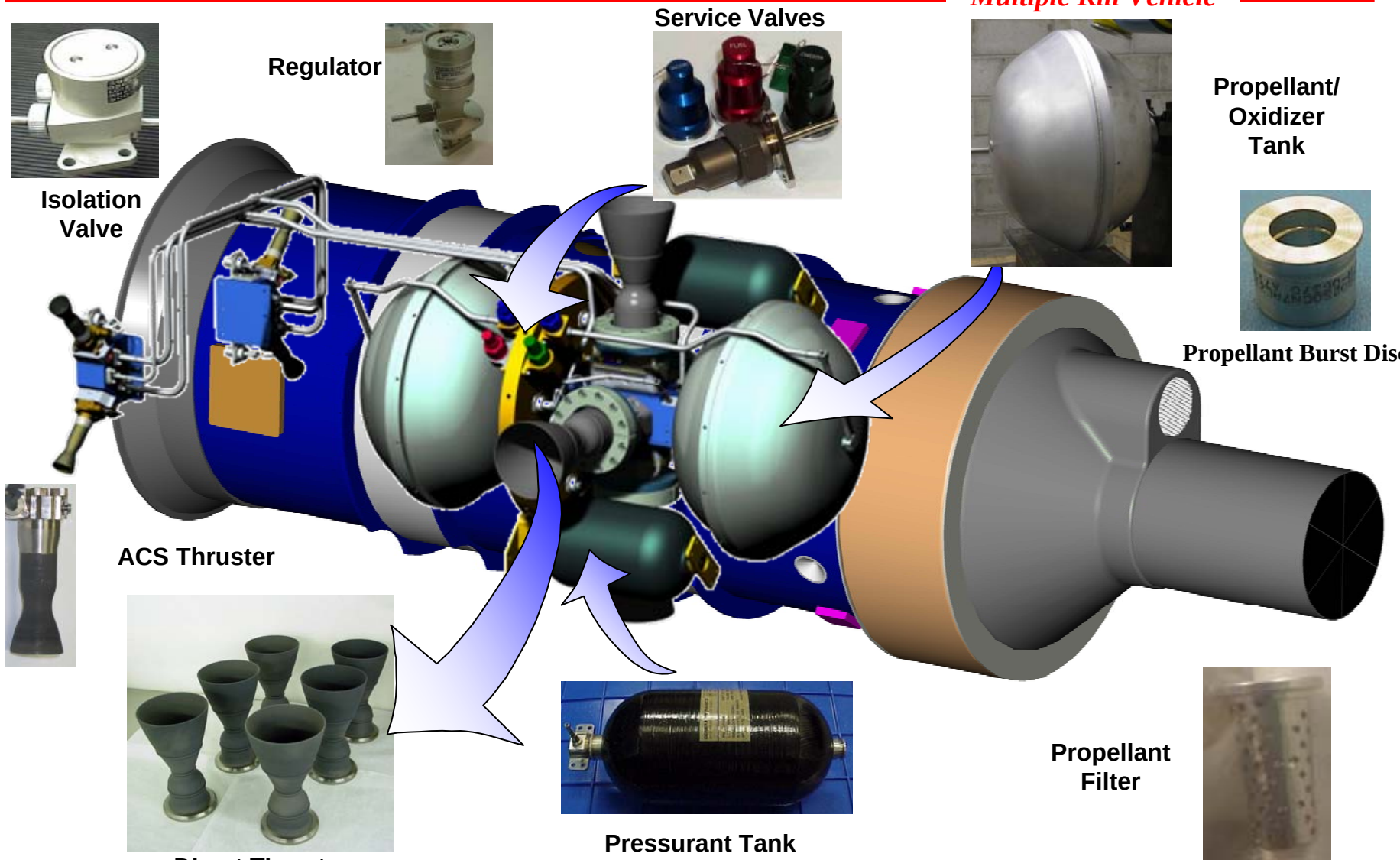
- **Propulsion**
  - Payload Divert and Attitude Control Systems
  - Hover Testbed at National Hover Test Facility
  - FY08 through Flight Test
- **Seeker**
  - Large Format, 2-color Sensor
  - Airborne "Captive Carry" Testing Of Pathfinder Seeker
  - FY09 through Flight Test
- **Engagement Management**
  - Develop "Best-of-breed" Algorithms
  - Processor and Seeker-in-the-loop Testing (HWIL)
  - FY07 through Flight Test



Prototype Electronics

Carrier Vehicle DACS Test (July 07)

Multiple Kill Vehicle



Technology Insertion Opportunities

Multiple Kill Vehicle

- **Advanced Sensors and Sensor Components**
- **Advanced Command, Control, Battle Management and Communications**
- **Advanced Divert and Attitude Control Systems**
- **Advanced Nosecone/shroud**
- **Design Improvements**
- **Cost Reduction Techniques**