



Fact Sheet

Advanced Technology

Advanced Technology develops new system concepts and key components to outpace the emerging ballistic missile threat.

- **Project Hercules:** Develops advanced detection, tracking, discrimination, and battle management software (algorithms) to improve the capability of the Ballistic Missile Defense System's weapon and sensor command and control.
- **Early Launch Detection and Tracking:** Provides early threat launch detection, and tracking to improve the effectiveness of systems like the Kinetic Energy Interceptor and Airborne Laser by increasing available time for target engagement.
- **Space-Based Passive Surveillance:** Develops space-qualified infrared sensors which will enhance the missile defense system's performance by improving detection, tracking, and target selection capabilities.
- **Radar System Technology:** Increases system affordability and countermeasures robustness, improves radar system coverage, tracking, and discrimination by using low power technology.
- **Interceptor Technology:** Explores, develops and demonstrates advanced concepts and technologies to enhance kinetic interceptors and laser systems. Technology areas include kinetic kill vehicles, improved seekers, propulsion, guidance, kill enhancement devices, and discrimination subsystem technologies focused on evolving threats.
- **Laser Technology:** Advances technologies in the key areas of laser weapons, beam control, adaptive optics, detectors and laser radar systems. Supports Airborne Laser upgrades and enables improved Ballistic Missile Defense weapons and sensors.
- **Innovation Program:** Serves as the Missile Defense Agency's primary focal point for soliciting new and innovative concepts from domestic industry and academic sources, as well as international organizations. Innovation also executes congressionally legislated science and technology efforts.
- **Technology Applications Program:** Assists Missile Defense Agency funded researchers at universities, private companies, and government research organizations in the commercialization of their technologies. This results in lower cost commercial-off-the-shelf components that meet missile defense requirements.

