

Son-of-Star Wars: National Missile Defence

MISSILE DETECTION

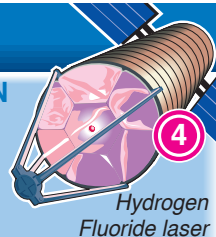
- 1. Space-Based Infra-Red system.** Constellation of 21 satellites provides "over-the-horizon" precision tracking and early trajectory estimate

TRACKING

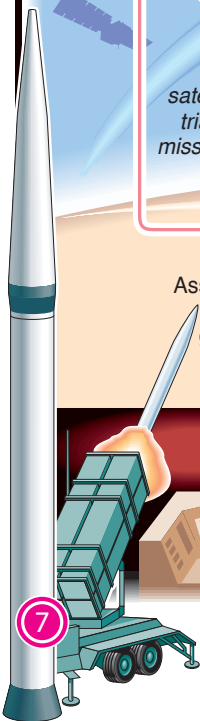
- 2. UHF Early Warning Radar** Mid-course detection and tracking initiates precision X-band tracking
- 3. X-band Radar** Precision tracking using narrow beam electromagnetic pulses. Forward locations, e.g. Fylingdales, UK

INTERCEPTION

- 4. Space-Based Laser:** 24-satellite constellation for interception over enemy territory
- 5. Ground-Based Interceptor** U.S.-based long-range delivery booster armed with EKV
- 6. Exoatmospheric Kill Vehicle (EKV)** Kinetic hit-to-kill technology destroys target on impact

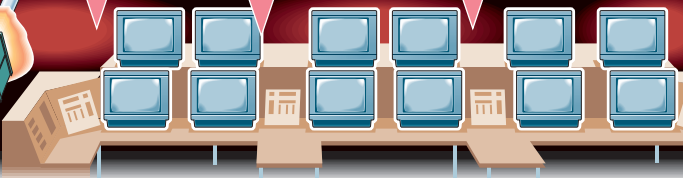


Hydrogen Fluoride laser



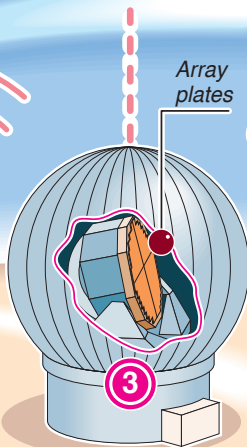
SBIR satellite pairs triangulate missile position

Command and Control
Assesses threat detection, and co-ordinates response, giving presidential control over NMD



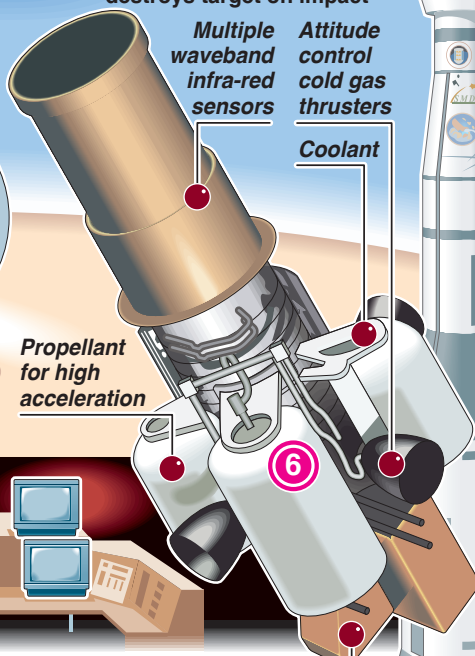
7. Theatre High-Altitude Area Defence (THAAD)

Mobile X-band radar, control system, launcher and missile armed with EKV. Primarily for protecting U.S. troops in the field. Unlike NMD, THAAD complies with U.S.-Russian Anti-Ballistic Missile Treaty



Array plates

3



Multiple waveband infra-red sensors

Attitude control cold gas thrusters

Coolant

Propellant for high acceleration

Communications

On-board hardware and software determines threat, adjusts trajectory for impact

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Sources: BMDO, Reuters