

Hypersonic & Ballistic Tracking Space Sensor



Notional Representation

Hypersonic and Ballistic Tracking Space Sensor (HBTSS) satellites will provide continuous tracking and enable handoff for targeting of enemy missiles, including hypersonic threats launched from land, sea or air. HBTSS is a critical part of the multi-layered OPIR constellation of satellites. It provides:

- Continuous tracking and handoff for targeting hypersonic threats.
- Near-global reach when prompted by other OPIR systems.
- Fire control solution required for HGV intercept.

In 2021, Northrop Grumman Corporation completed the critical design review of the HBTSS prototype for the Missile Defense Agency. The review established the company's technical approach for precise, timely sensor coverage to defeat ballistic and hypersonic missiles.

The HBTSS satellites are also designed to track threats with near global reach when prompted by other OPIR systems, well before they come into view of U.S. ground-based defenses.

Northrop Grumman received a \$153 million contract from the MDA earlier this year for the Phase IIB portion of the HBTSS program and is on schedule to deliver the HBTSS prototype in 2023. After the HBTSS prototype is delivered, the company will conduct an on-orbit test to demonstrate its ability to continuously track and rapidly process its observations of hypersonic threats, as well as its ability to effectively hand off the information so the missile is intercepted.

HBTSS Missions



- The HBTSS prototype is a fast-tracked program, ready to launch in 2023.
- Multi-wavelength optical sensor with high sensitivity for dim target detection.
- Less than 27 months from contract award to launch.



Detect & track all-range missiles



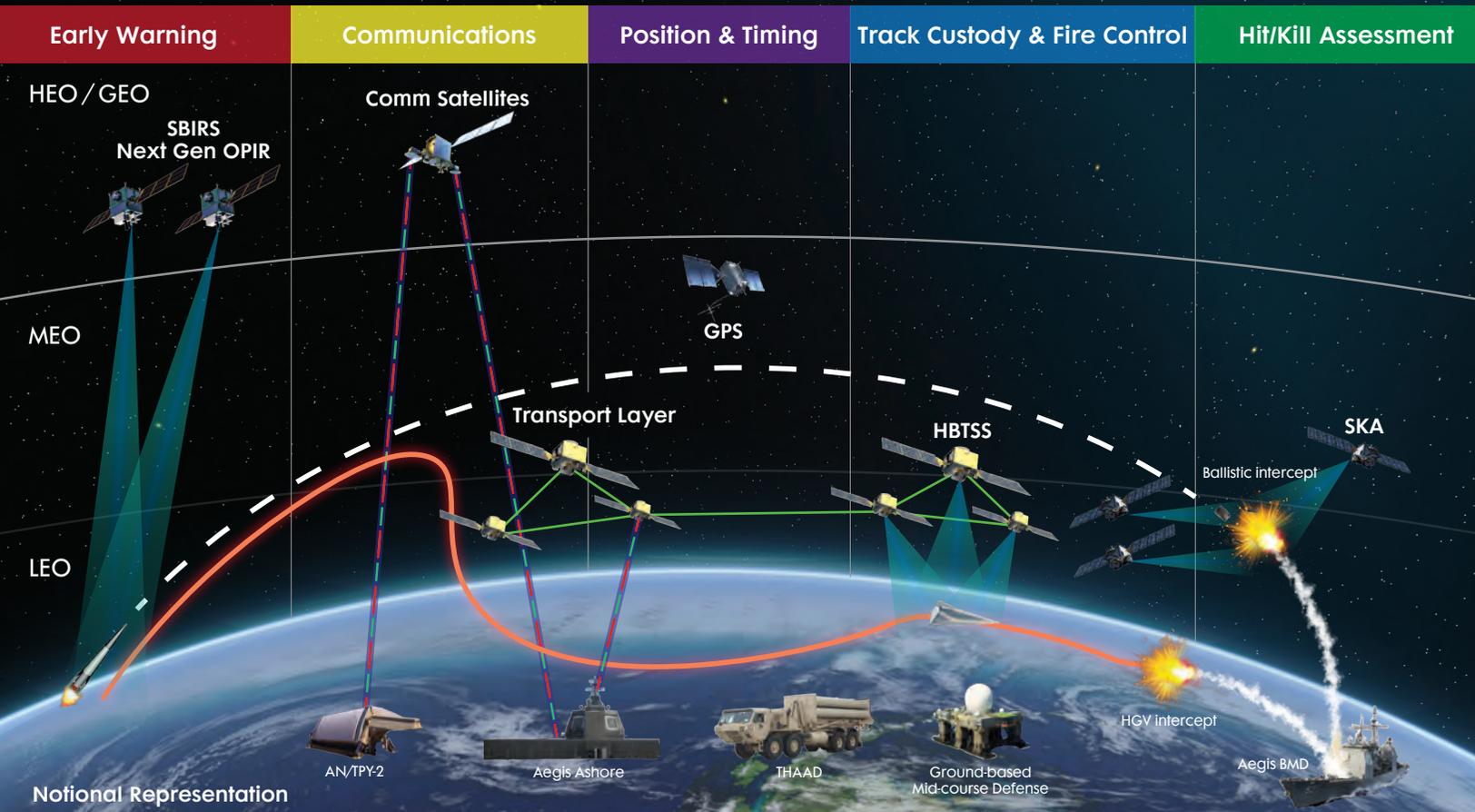
Monitor static tests



Detect & track hypersonic glide vehicles



Detect & track satellite launches, maneuvering, & re-entry



Capabilities

- High-Sensitivity
- Low latency
- Weapons quality track for fire control
- The affordable solution

End-to-End Missile Defense

Responding to cues from the Warning and Custody layers, an HBTSS constellation will fill the final gap in missile defense by providing high-precision target tracks to battle management and fire control systems, supporting intercept of advanced missile threats – including hypersonic glide vehicles.