



***Space Tracking
and Surveillance
System
Demonstrators***

*Birth-to-death ballistic
missile tracking*



THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

Space Tracking and Surveillance System Demonstrators

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Real on-orbit performance

Now ballistic missiles have no place to hide. Two Northrop Grumman-built Space Tracking and Surveillance System (STSS) demonstrator satellites are on-orbit, demonstrating capabilities required for birth-to-death tracking of ballistic missiles and other cold objects in space.

Both satellites fly and work in tandem as a risk reduction mission by the U.S. Missile Defense Agency (MDA), paving the way for an operational constellation.

Using sensors capable of measuring infrared radiation from the vantage point of space, the satellites have demonstrated their ability to detect missile launches, track missiles from boost into midcourse, and communicate with missile defense command and control systems.

Space-based asset

Since launch in 2009, the two spacecraft have demonstrated the value of space-based sensors to missile defense. In addition to their missile tracking capability, the demonstrator satellites are showing how fewer Aegis missile defense destroyers can defend larger areas by using external cues provided by space-based sensors.

Relaying timely tracked data from the onboard infrared sensors to the Ballistic Missile Defense System (BMDS) intercept chain is a critical capability for

destroying missiles as early in their flight as possible.

For warfighters, these proof-of-concept tests mean earlier threat detection, interceptor launch, assessment of intercept effectiveness and the opportunity for a second intercept, if needed.

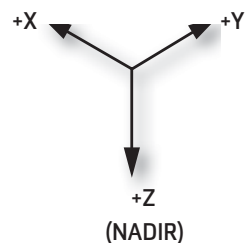
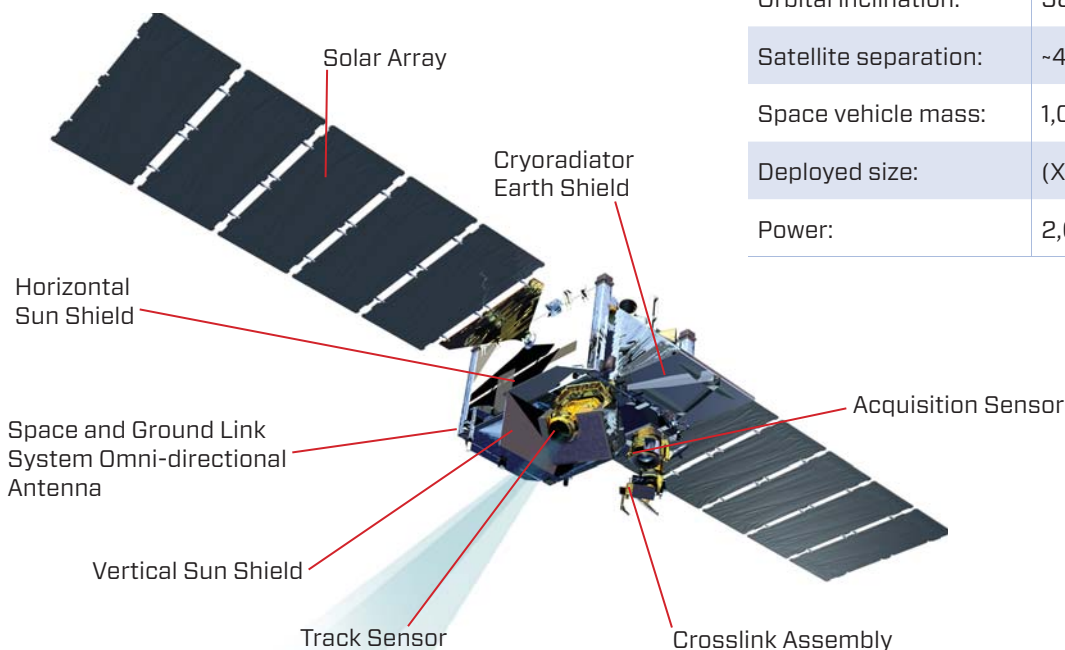
An integral part of the future BMDS

The STSS Demonstrators, currently on-orbit, represent MDA's initial step in developing a space-based system of sensors that could provide persistent tracking of enemy missiles — from boost through ascent, midcourse and re-entry. Their mission to validate technology maturity and system capabilities will pave the way toward deployment of a fully operational missile defense satellite constellation.

The constellation, once deployed, will work in conjunction with other existing land-, sea-, air- and space-based BMDS sensors to stand watch worldwide, 24/7, to protect the United States, its allies and military forces against the ever-increasing ballistic missile threat.

Specifications

Altitude:	1,350 km (840 miles)
Orbital inclination:	58°
Satellite separation:	~40° in-plane
Space vehicle mass:	1,023 kg (2,255 lb)
Deployed size:	(X) 7'5" (Y) 40'3" (Z) 5'9"
Power:	2,000 W



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