

STELLAR TEAM

NOBLE MISSION



26th Space and Missile Defense Symposium

*"Quarter Century of Missile Defense
Collaboration and Teamwork"*

Major General Heath A. Collins
Program Executive for Ground-based Weapon Systems
Missile Defense Agency
10 August 2023



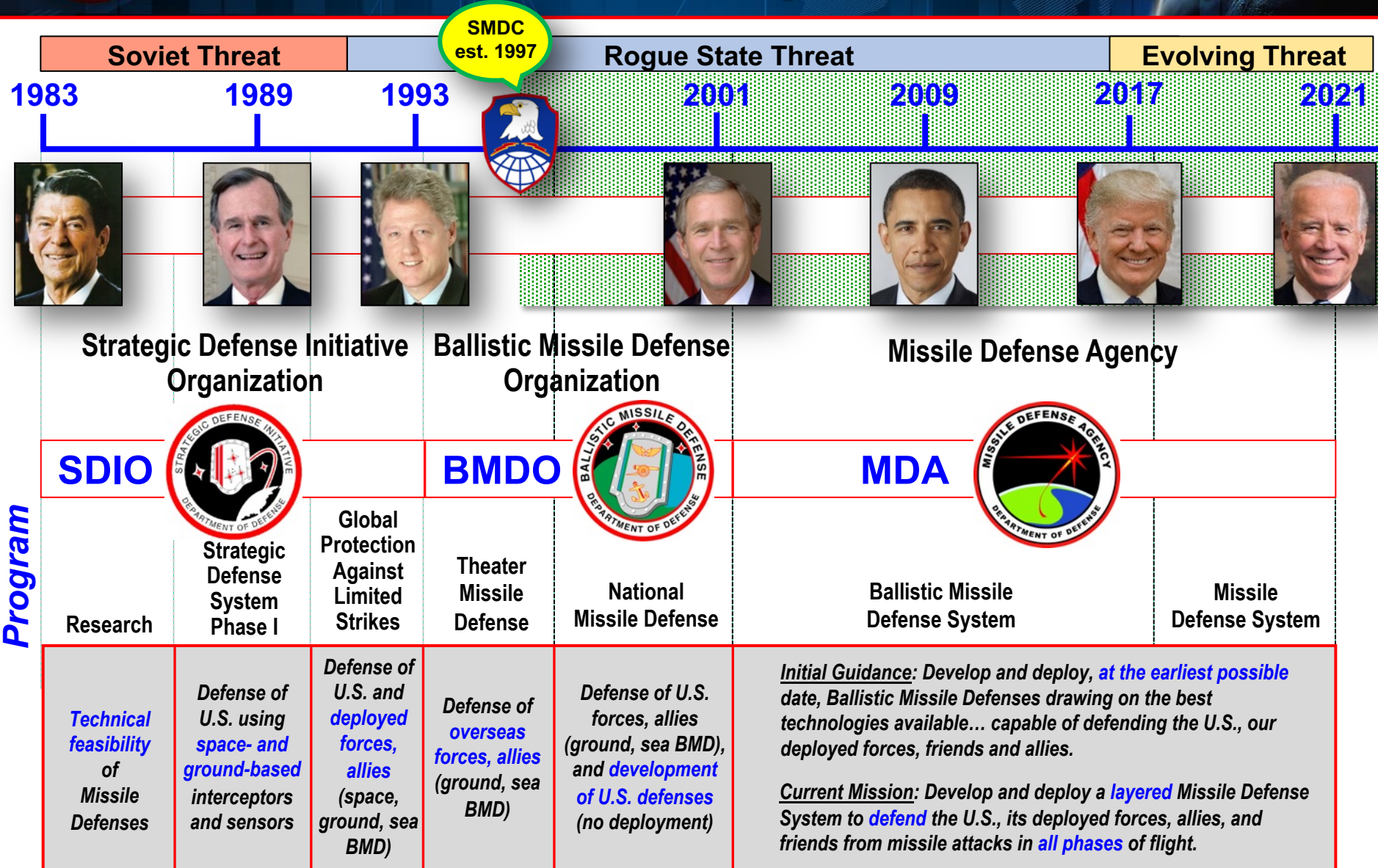
Missile Defense Agency Video





MDA Origins

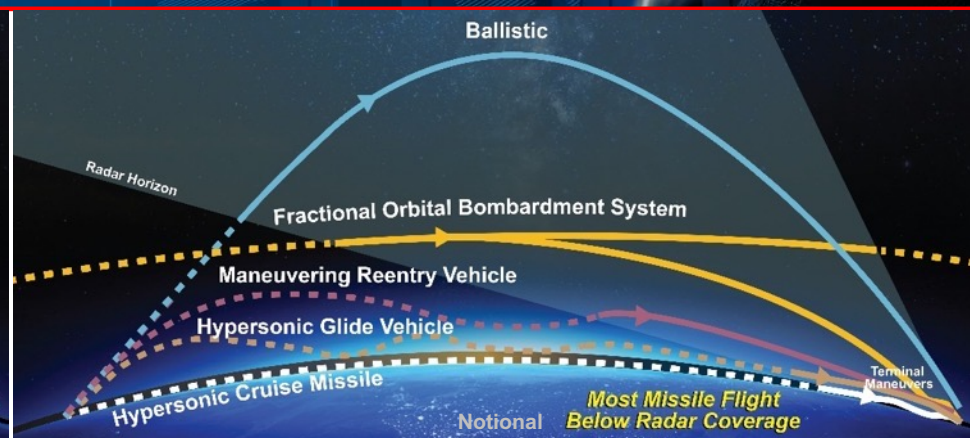
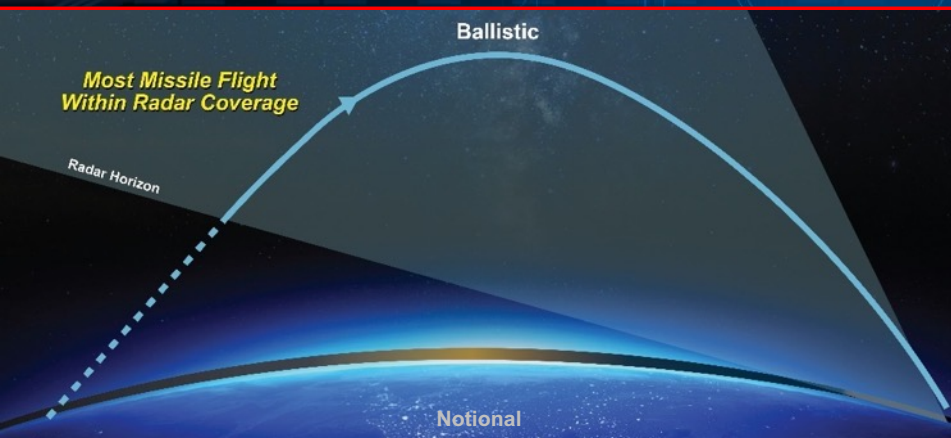
Teamwork with Services & Warfighters for Quarter Century





Missile Defense Then and Now

Unprecedented Threat Evolution



	20 Years Ago	Today
Missiles	Ballistic	Ballistic, Maneuvering Ballistic, Hypersonic Glide, Cruise
Ranges	Short to Intercontinental	Short to Intercontinental to Global
Launch Points	Ground	Ground, Ship, Sub, Air
Countermeasures	Simple	Simple to Sophisticated
Targets	Homeland: Western U.S. Regional: Allies, Ports, Bases, Airfields	Homeland: Entire U.S. Regional: Allies, Ports, Bases, Airfields Mobile Forces: Ships, Armies, Logistics
Raid Sizes	Moderate, single missile type	Large, multiple missile types
Trajectories	Ballistic	Ballistic, Maneuvering, Lofted and Depressed Flight Paths



Today's Layered Active Missile Defense System

BATTLE 1 HOMELAND DEFENSE

BATTLE 2 REGIONAL DEFENSE

BATTLE 3 SELF DEFENSE

SENSORS



Surveillance & BMDS Overhead Persistent Infrared (OPIR) Architecture (BOA)



Cobra Dane Radar



UEWR Radars



Sea-Based X-Band Radar



TPY-2 Forward Based Radars



AEGIS BMD SPY-1 Radars



THAAD TPY-2 Radars



Patriot MPQ-65 Radars

COMMAND & CONTROL, BATTLE MANAGEMENT & COMMUNICATIONS (C2BMC)

COMBATANT COMMANDS, JOINT STAFF, SERVICES & MDA



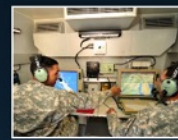
GMD



AEGIS



THAAD



Patriot

WARFIGHTING ASSETS



Ground-based Midcourse Defense (GMD)



AEGIS Ashore



AEGIS



THAAD



Patriot

WEAPONS

GBI
Ground Based Interceptor

SM-3
BLK IIA

SM-3
BLK IA/IB

THAAD
Terminal High Altitude Area Defense

SM-6
Sea Based Terminal

MSE
PAC-3
Missile Segment Enhancement

PAC-3
Patriot Advanced Capability-3



Homeland Missile Defense

Strong Partnership & Teamwork with Services & Warfighters



COBRA DANE

Space Force



Ground-based Missile Defense (GMD)

Army



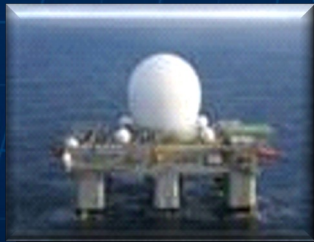
UEWRs

Space Force



Space Sensors

Space Force



SBX

**NORTHCOM
STRATCOM
INDOPACOM**



C2BMC

**NORTHCOM
STRATCOM
INDOPACOM
SPACECOM
EUCOM**



**Aegis
BMD Ships**

Navy



AN/TPY-2

Army



THAAD

Army



Near Term Missile Defense Capabilities



Hypersonic and Ballistic Tracking Space Sensor (HBTSS) Launch



Long Range Discrimination Radar (LRDR)



Aegis Ashore Poland



Missile Defense Agency Video



Hypersonic & Ballistic Tracking Space Sensor (HBTSS) Satellites

(2 mins 40 secs / Sound & Narration)



Missile Defense Agency Video





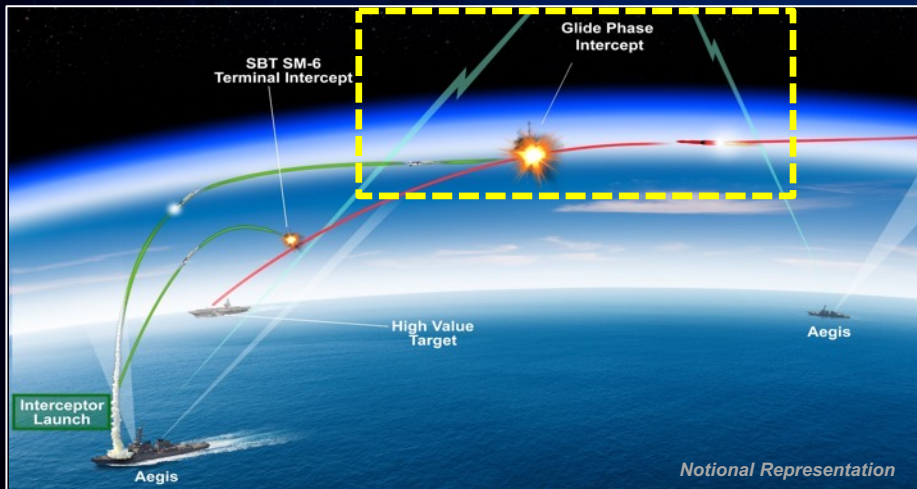
Future Missile Defense Capabilities



Next Generation Interceptor (NGI)



Defense of Guam



Glide Phase Interceptor (GPI)



Augment Kinetic Kill with Directed Energy



International Cooperation

Asia / Pacific

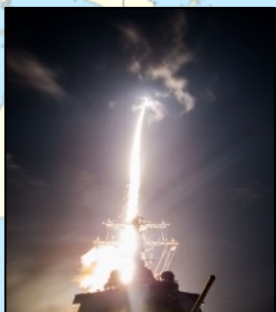
- Missile Defense for Japan
- THAAD deployment to ROK
- Joint Analysis Activities
- Science & Technology Efforts
- Pacific Dragon Exercises

Europe

- NATO BMD
- European Phased Adaptive Approach (EPAA) Phase 3, including Aegis Ashore sites
- Joint Analysis Activities
- Science & Technology Efforts

Middle East

- UAE and Kingdom of Saudi Arabia THAAD FMS Execution
- Israeli Cooperative Missile Defense Programs
- Regional interest in early warning capabilities



Engagement /
Outreach

Missile Defense
Analysis

Cooperative Missile
Defense Projects

Co-development

Co-production

FMS

Deployment



Teamwork & Collaboration with Services & Warfighters for Quarter Century

Ground-based
Midcourse Defense

C2BMC Support to
Combatant Commands

Sensors

***Missile Defense
Enterprise is Strong!***

Aegis BMD At-Sea

Terminal High Altitude
Area Defense

Aegis Ashore

STELLAR TEAM

NOBLE MISSION

