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## **Targets and Countermeasures**

The Targets and Countermeasures (TC) program develops quality, threat representative and cost effective target solutions enabling the Ballistic Missile Defense System (BMDS) to test system performance and demonstrate its effectiveness in threat relevant environments.

## Overview

- TC oversees the design, development, manufacture, integration and delivery
  of threat-representative, reliable, and cost-effective ballistic missile targets
  and countermeasures for the BMDS.
- Target quality, reliability, and affordability have continued to be fundamental initiatives as the complexity and pace of threat development and missile defense testing increases.
- Since 2000, TC has delivered 173 targets in support of BMDS testing with a 97% success rate since 2010, 58 of 60 successful targets.



## **Details**

Target systems include launch vehicles, payloads (including surrogate re-entry vehicles and countermeasures), launch support equipment, extensive instrumentation, and flight control stations.

- Short-Range Ballistic Missile (SRBM) (up to 1000km): The SRBM Target class is made up of Aegis Readiness
  Assessment Vehicle (ARAV) -A, -B, and -C, Foreign Material Asset (FMA) -1 and the Short Range Air-Launched
  Target (SRALT). Other variants of ARAV targets are also being developed and used such as ARAV- G.
- Medium-Range Ballistic Missiles (MRBM) (1000-3000km): The MRBM Type 1 and Type 2 targets are of the same design where the Type 1 provides a simple 1000-1700 km target. Type 2 provides the ability to create a more complex scene for BMDS testing. The Type 3 is a specialty target in this range class and is designed to replicate a specific threat. In addition to MRBM Type 1-3, the Agency has additional MRBM targets within the portfolio including the Extended MRBM (eMRBM) and the Extended Long Range Air-Launched Target (eLRALT), and the ARAV-TTO-E to meet some of the Medium Range requirements.
- Intermediate-Range Ballistic Missiles (IRBM) and Intercontinental Ballistic Missiles (ICBM) Intermediate (3000-4500km) and Intercontinental (>5500km): The IRBM Type 1 is a two-stage, air launched target, first launched in FY15. The IRBM Type 2 provides the ability to create a more complex scene for BMDS testing. The ICBM is a ground-launched three-stage target with the first launch scheduled for FY17.
- Modified Ballistic Re-Entry Vehicle (MBRVs and CMs): TC develops cost-effective Modified Ballistic Re-Entry Vehicles (MBRV) in seven different varieties, and multiple configurations of countermeasures (CM) solutions with systematic rigor leading to delivery of timely, quality products in support of the TC family of Launch Vehicles for BMDS Testing.

## **Summary**

The role of the Targets and Countermeasures Program is to develop and provide threat-relevant targets for BMDS testing. With an increased focus on leveraging industry's existing products and developments for Targets and Countermeasures, the MDA will draw on the currently available and future technologies to provide reliable threat-relevant targets to demonstrate the Ballistic Missile Defense System.