



# RATS

Readiness Assessment Test Systems



## Summary

- Readiness: range requirement coordination, environmental/treaty compliance, readiness through testing
- Assessment: develop/execute plan, risk assessment/mitigation, verification review, operational testing of threat representative systems
- Test Systems: launch theater class systems, go/no go matrix development, countdown development/coordination

**The U.S. Army Space and Missile Defense Command/U.S. Army Forces Strategic Command (SMDC/ARSTRAT) RATS pursuits will provide operational programs a full service solution for missile defense test and evaluation.**

The RATS Program will seek to provide customer satisfaction via mission successes. With the RATS Program, benefits to the customer include custom requirements design, flexible article launch sites, and reduced customer cost through a diverse supplier base. The RATS Program will fill the gap in Theater Class Requirements.

### Readiness Assessment Test Systems

#### Overview

The objective of the RATS Program is to fill the gap in Theater Class requirements. The RATS Program will provide the customer full service Flight Article design, integration, and test execution.

The RATS family of Flight Test Articles (FTAs) is designed to provide the Department of Defense (DoD) a low cost target alternative for the high fidelity family of FTAs currently in the DoD inventory. Additionally, the RATS suite of FTAs is designed to provide lower fidelity FTAs to DoD customers for use during the initial DT/OT or research and development phases of new anti-missile defense systems as well as improvements to anti-missile systems presently deployed.

#### Benefits for Tomorrow's Defense

The RATS Program will provide a variety of guided and non-guided spin stabilized rocket systems to the user. The program will add flexibility, efficiency, and reliability to target launches. The RATS Program will improve the operational testing of missile defense systems against Theater-class FTAs.

#### Technical Concept

The RATS Program supports development of a low, cost effective short- to medium-range class of boosters for missile defense theater class flight testing. The anticipated range of the RATS family of FTAs will be from a minimum of 50 kilometers to a maximum of approximately 3800 kilometers. The RATS FTAs will include single-stage ballistic FTAs through multi-stage separating FTAs as boosters using either military rocket motor platforms or 21st century robust commercial motors to include foreign military assets.

The RATS family of FTAs will be capable of launching from transportable rail/steel launchers. These launchers can be emplaced on existing improved launch positions or unimproved launching positions with a ground slope of less than five (5) degrees. This ability increases the possible launch areas RATS can utilize, which increases flexibility and responsiveness and the range's ability to meet customer requirements.

Additional RATS Government Furnished Equipment (GFE) FTAs vehicles may be developed to satisfy specific customer requirements.

The RATS Integration, Fabrication, and Testing Facility will utilize the Redstone Technical Test Center (RTTC) at Redstone Arsenal, Alabama. This facility will be capable of: a) fabricating missile interface sections, telemetry hardware components, RV sections, fin and fin interface sections as well as booster interconnection sections; b) testing missile hardware components to include weight and center of gravity, spin stabilization as well as missile hardware fit checks; and c) electronic end-to-end checks of the entire RATS system. As a result, the RATS family of FTAs will require only limited integration operations to be performed at the launch area.



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