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Navy Theater Wide SM-3 Rocket Motor Test

The U.S. Navy and the Ballistic Missile Defense Organization successfully static test fired a flight-weight two pulse Third Stage Rocket Motor (TSRM) 18 November. This was the fourth consecutive successful two pulse motor demonstration, and the first test of the flight-weight TSRM at Edwards Air Force Base high altitude chamber which simulates actual altitude operating conditions. Future tests of this critical STANDARD Missile-3 (SM-3) subsystem will also integrate an attitude control system with the rocket motor to verify the complete motor assembly configuration prior to flight.

The TSRM is a two pulse rocket motor, with the capability to delay ignition of the second pulse for a variable length of time after burnout of the first pulse. This interpulse delay provides mission flexibility for the Navy's upper tier approach. The TSRM also features an advanced graphite/epoxy pressure vessel, an omni-axis thrust vector controlled nozzle, and a hybrid cold/warm gas attitude control system.

This successful rocket motor firing shortly after the Navy's first successful SM-3 flight test 24 September keeps the program on track with preparations for the next flight test. This next test, designated FTR-1, will include a live TSRM as the Navy's objectives expand to include demonstration of all the critical propulsion subsystems. Following a successful demonstration of FTR-1, the FTR-2 flight test will add a kinetic warhead with a live Solid Divert and Attitude Control capability, as the next key step towards demonstrating the objective of conducting an exo-atmospheric intercept.

This successful test firing is another significant step on the road to developing capability for the Navy and the Ballistic Missile Defense Organization's Theater Wide missile defense program and maintaining the potential for the earliest possible system deployment.

The Program Executive Office for Theater Surface Combatants sponsors and executes the Navy Theater Wide program. TSRM is designed, developed, and fabricated by Thiokol Propulsion at its Elkton, MD facility and Raytheon Missile Systems Co. is the missile integrator for the SM-3.