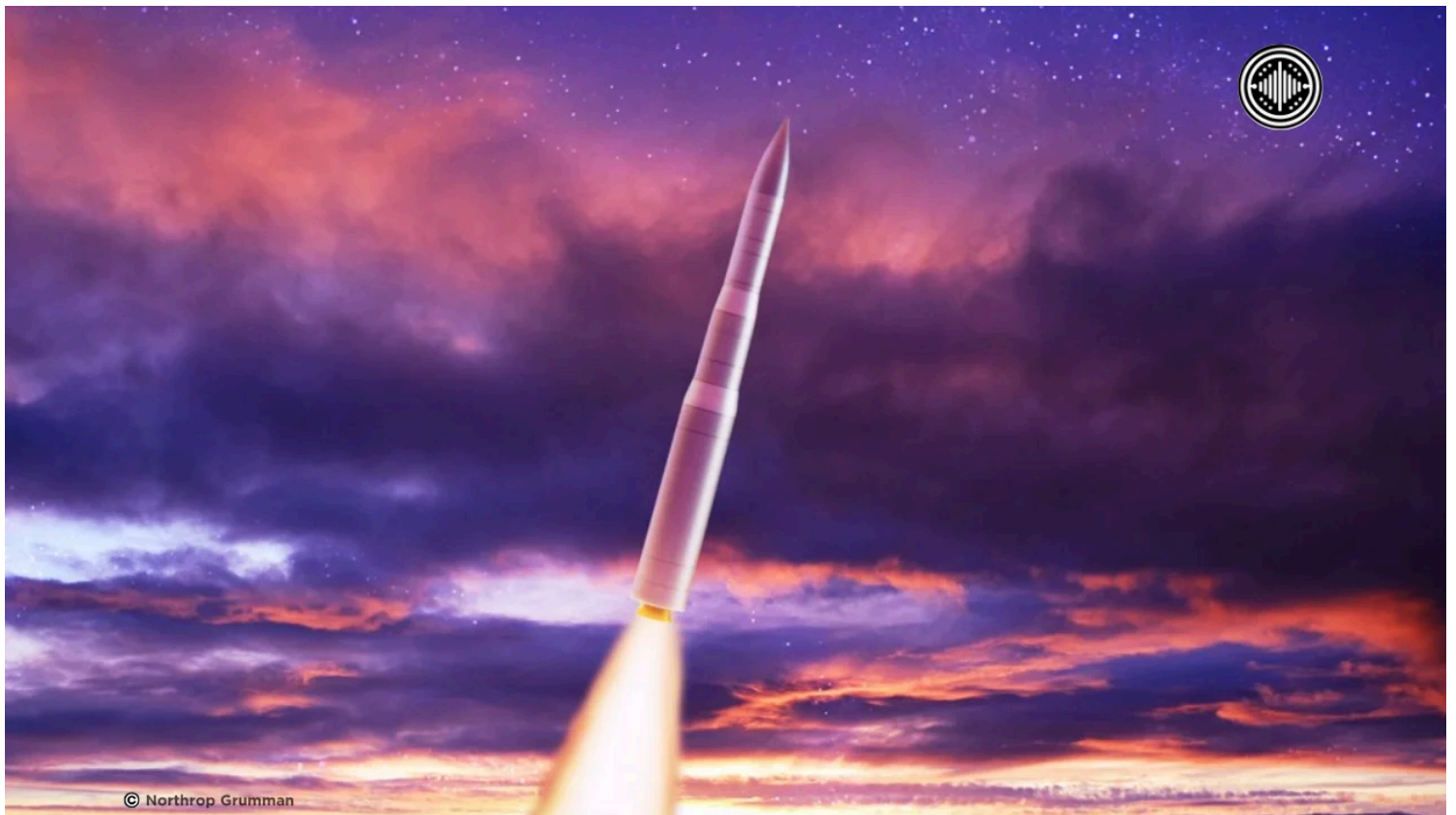


U.S. Air Force Advances Sentinel Program with Second-Stage Rocket Motor Test

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The U.S. Air Force and Northrop Grumman have completed a full scale qualification test of the second-stage solid rocket motor for the LGM-35A Sentinel intercontinental ballistic missile (ICBM), marking a critical step in the modernization of the country's land-based nuclear arsenal.

The test, conducted on July 20 by the 717th Test Squadron at the Arnold Engineering Development Complex in Tennessee, was carried out in a vacuum chamber designed to replicate high-altitude conditions. It evaluated the motor's thrust, burn characteristics, and the effectiveness of its thrust vector control system, which directs the missile during flight.

This motor represents the second of three propulsion stages in the Sentinel missile. Engineers will now analyze the performance data to compare with digital engineering models and refine the system's design, aiming to minimize technical risk as the program moves toward operational deployment.

Brigadier General William S. Rogers, the Air Force's program executive officer for intercontinental ballistic missile systems, said the test reflects growing confidence in both the program's technical direction and its development timeline. He added that such milestones are essential to ensuring the U.S. maintains a reliable and credible nuclear deterrent.

The successful second stage motor test follows a similar qualification event for the first stage booster held in March at Northrop Grumman's Utah facility. That earlier test also demonstrated close alignment between predicted and actual performance.

The Sentinel program, which will replace the aging Minuteman III system, relies heavily on digital engineering practices. This approach allows the Air Force to streamline development, reduce the need for physical prototypes, and simulate performance with greater precision.

Future qualification tests will expose the motor to varied environmental and operational conditions to ensure reliability under real world

scenarios. These will be vital in certifying the system before production and deployment phases begin.

Scheduled for initial deployment in the early 2030s, the Sentinel ICBM is expected to remain in service through at least the mid-21st century. It is part of a broader effort to modernize all three legs of the U.S. nuclear triad.

This latest motor test demonstrates the program's steady progress and the Air Force's commitment to delivering a secure and technologically advanced strategic deterrent.