



NEWS RELEASE

UNITED STATES AIR FORCE

SPACE & MISSILE SYSTEMS CENTER (AFMC)

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Air Force successfully Launches Rocket from Kodiak Island

Kodiak Launch Complex Alaska — An Air Force and aerospace industry team successfully launched a Quick Reaction Launch Vehicle from here today on a sub-orbital flight along the West Coast of North America.

The rocket launched at 2:15 p.m. AST and flew for a little more than seven minutes before impacting the ocean as scheduled approximately 383 miles downrange. This was the third sounding rocket launched by the Air Force in three years from the commercial launch facility here. The Air Force previously launched the sub-orbital atmospheric interceptor technology rockets from KLC in November 1998 and September 1999. All of the rocket flights have been in a southeasterly direction from Kodiak Island.

The Air Force has developed a program to launch rockets on sub-orbital flights in support of Department of Defense operations and exercises in the Alaskan Theater. The Quick Reaction Launch Vehicle program will assemble launch vehicles and fly them within one year of a Defense Department request. The Air Force anticipates the launches will support the Alaskan Command Northern Edge exercise held annually in March.

The primary objective of the QRLV program is to provide realistic theater ballistic missile scenarios in support of the Alaskan Command Northern Edge exercise.

The Quick Reaction Launch Vehicle development, acquisition, and launch process are managed by the Air Force Space & Missile Systems Center's, Rocket Systems Launch Program (SMC/TEB) located in Albuquerque, New Mexico. The Air Force Materiel Command's El Segundo-based Space & Missile Systems Center is the headquarters for SMC/TEB and the contracting authority for many Defense Department satellites and launch vehicles.

The QRLV program began in Fiscal Year 2000, and consists of launching up to eight sub-orbital vehicles (one QRLV per year) until FY 2008. For the \$9.5 million QRLV-1 mission, SMC/TEB awarded task orders to the Orbital Sciences Corporation (\$4.4 million) to integrate the launch vehicle, and to the Alaska Aerospace Development Corporation (\$1 million) for lease of launch facilities at the Kodiak Launch Complex located on the Narrow Cape peninsula of Kodiak Island. Integrated Concepts Research Corporation of Kodiak was awarded a separate task order valued at about \$2 million to provide logistics and spaceport support for the Air Force launch.

The QRLV-1 sounding rocket is a 360 inch-long, 14,100-pound single-stage launch vehicle. It is powered by an M56A1 -- a four-nozzle solid propellant rocket motor with a titanium case. It uses a thrust vector control for steering and stabilization. The M56A1 itself is 12.96 feet in length, 3.71 feet in diameter and 11,402 pounds in weight. The motor contains approximately 10,372 pounds of solid propellant. The inner propellant is Class 1.3C, designated ANP-2864. The outer propellant is ANP-2862. ANP consists of ammonium perchlorate, polyurethane and aluminum.

The Alaskan Command Northern Edge exercise is an annual joint-services arctic-weather training exercise involving more than 10,000 troops from all branches of the U.S. armed forces and Alaska-region Canadian Forces. The



exercise is designed as a regional crisis response scenario, with participating units employing selected component forces. The QRLV launches will allow Northern Edge participants to execute ballistic missile warning, battle management, command, control and communications capabilities, test planning scenarios and exercise defensive strategies during an actual ballistic missile flight. . The rocket should reach an apogee (or height) of 160 kilometers, fly for approximately 436 seconds and travel approximately 604 kilometers downrange before landing in the Gulf of Alaska.

As secondary objectives, the QRLV-1 vehicle hosted a suite of experiments, including a Global Positioning System (GPS) experiment, two U.S. Army Space and Missile Defense Command (SMDC) battery experiments, and a Space Integrated GPS/INS (SIGI) missile guidance unit demonstration. An Air Force Research Laboratory (AFRL) mobile Flight Termination System (FTS) will also be integrated and tested for the first time during the QRLV-1 launch.

The United States Army Space and Missile Defense Command Airborne Surveillance Testbed aircraft performed the Quick Reaction Launch Vehicle Risk Reduction Flight mission. The AST aircraft is a version of the commercial Boeing 767 jet transport modified to support flight testing of ballistic missile defense technology, such as infrared sensors and laser communications. External modifications include a faired cupola on top of the forward fuselage, and ventral fins added underneath the aft fuselage. The AST Primary Long-Wavelength Infrared sensor, built by Raytheon (formerly Hughes), and the Navy Theater Wide Aegis Lightweight Exo-Atmospheric Projectile Intercept Captive Carry Standard Missile 3 Infrared Seeker, also built by Raytheon, are located in the two cupola modules. The cabin of the aircraft is configured with equipment for sensor signal processing, data processing, data recording, communications, and flight test instrumentation, along with the operator consoles needed to control the equipment during flight test missions. AST has also added cryogenic systems to the airplane to cool the sensor focal planes and manage the temperature and humidity in the modules.

Additionally, the QRLV-1 will provided a flight-ready vehicle with an appropriate trajectory for the U.S. Navy Theater Wide program and provided a Theater Missile Defense scenario for the exercise. The U.S. Navy's guided missile cruiser Lake Erie (CG-70) tracked the rocket and its communications systems and determined position and velocity information.

The mission of Navy Theater Wide Ballistic Missile Defense system is to provide defense in depth from the threat of Theater Ballistic Missile attack for U.S. and allied forces overseas, including vital areas, critical military assets, population centers and large geographic regions. Navy Theater Wide takes advantage of available sea room and ship mobility to achieve intercepts on the target Theater Ballistic Missile in the ascent, mid-course and terminal stages of exo-atmospheric flight. Navy Theater Wide provides the forward positioned upper tier of the multi-tiered BMDO Family of Systems. Navy Theater Wide supports U.S. political and military objectives and reassures coalition allies without requiring host nation support.

Navy Theater Wide leverages investment in the Aegis Cruiser fleet, and evolves existing systems/proven technologies into upper tier Navy Theater Ballistic Missile Defense capability from Navy area TBMD capability. It integrates development modifications of the Aegis Combat System, including SPY-1 radar and the new Standard Missile 3 (SM-3). SM-3 is evolved from SM-2 Block IV and Light Exo-Atmospheric Projectile (LEAP) with a Third Stage Rocket Motor and a Hit To Kill Kinetic Warhead.

The Air Force M56A1 was manufactured by Aerojet General Corporation as the 2nd stage rocket motor for the now retired Minuteman 1 ICBM weapons systems. Since the deactivation of the Minuteman 1, the M56A1 rocket motors have been stored by the Air Force Space and Missile Systems Center and used on several flights.

Memorandum for Correspondents

News media representatives interested in attending the launch should contact Elaine Test at the Alaska Aerospace Development Corporation Public Affairs Office 907-561-3338 or 907-868-1574 (KLC).

The Air Force Space and Missile Systems Center Public Affairs point of contact is Major Richard Williamson at 907-868-1574 (KLC) or Mr. Hap Parker at 310-363-0030 (LA AFB).

The Navy Theater-Wide Public Affairs point of contact is Captain Chris Taylor (703) 602-7144 ext. 128 (Navy PEO-TSC)

The Alaskan Command Public Affairs point of contact is Lt. Col. Les Kodlick at 907-552-2341.

Updated March 26, 2001 for photo