Lockheed Martin's Atlas V Selected To Launch Mars Science Laboratory In 2009

MSL Mission Will Interact With Mars Reconnaissance Orbiter, Also Launched on Atlas V

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Lockheed Martin's Atlas V rocket has been selected by NASA to launch the Mars Science Laboratory (MSL) mission in 2009 from Cape Canaveral, Fla. The mission will fly on a powerful Atlas V 541 configuration to propel MSL on a half-year journey to the red planet.

"We are extremely proud of the trust NASA has placed in our team to deliver the biggest ever rover to Mars," said Jim Sponnick, Atlas program vice president for Lockheed Martin Space Systems Company. "This comes on the heels of two recent, very successful Atlas launches for NASA, the Mars Reconnaissance Orbiter and Pluto New Horizons. We are excited to be a part of our nation's space exploration efforts."

Boosting the 7,900-lb. MSL spacecraft into a Mars transfer trajectory will require the Atlas V 541, similar to the Atlas V 551 that launched the New Horizons mission to Pluto in January. The 541 configuration includes four strap-on solid rocket boosters, each of which adds an additional 300,000 lbs. of thrust to the almost 1,000,000 lbs. provided by the core vehicle's RD-180 engine. The Atlas V 541 vehicle will also utilize a 5-meter fairing to protect the MSL payload on the ascent. Once the boost phase of flight is complete, the Centaur upper stage will perform two engine burns to place MSL into a Mars transfer trajectory. Scheduled for launch in the fall of 2009, MSL will land on the surface of Mars in spring 2010 and begin its two-year mission.

Atlas V launched NASA's most recent Mars mission, the Mars Reconnaissance Orbiter (MRO), in August 2005. It arrived at Mars in March 2006 and is executing a series of orbit-lowering maneuvers prior to beginning its primary science mission. MRO will help determine the landing site for MSL, and later it will serve as a communication relay for MSL once the lab is on the Martian surface.

"After launching both of these spacecraft on Atlas, it will be very rewarding to see them working together on and around Mars," said Vernon Thorp, Atlas program manager for NASA mission at Lockheed Martin. "Atlas's performance and reliability help make missions like these possible."

The space agency awarded the MSL launch to Lockheed Martin under the terms of the NASA Launch Services contract signed in 2000. This agreement was designed to be the primary way for NASA to procure launch services on the Atlas vehicle through 2010. Atlas V vehicles have now achieved 100% mission success in eight flights. Atlas II, III, and V configurations have achieved 79 consecutive one-at-a-time launch successes since 1993.

In March Lockheed Martin was also selected to design the aeroshell system for the MSL mission. Lockheed Martin will design and build the system, which includes the composite load carrying structure and the thermal protection systems (TPS). The blunt-nosed cone will encapsulate and protect the MSL rover from the intense head and friction generated as the system descends through the Martin atmosphere.

Atlas boosters and Centaur upper stages are built by Lockheed Martin Space Systems Company at facilities in Denver, Colo.; Harlingen, Texas; and San Diego, Calif. Atlas launch operations are conducted at Cape Canaveral Air Force Station, Fla., and Vandenberg Air Force Base, Calif.

Lockheed Martin Space Systems Company, headquartered in Denver, Colo., is one of the major operating units of Lockheed Martin Corporation. Space Systems designs, develops, tests, manufactures and operates a variety of advanced technology systems for military, civil and commercial customers. Chief products include a full-range of space launch systems, ground systems, remote sensing and communications satellites for commercial and government customers, advanced space observatories and interplanetary spacecraft, fleet ballistic missiles and missile defense systems.

Headquartered in Bethesda, Md., Lockheed Martin employs about 135,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2005 sales of $37.2 billion.

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For an image of the Atlas V Pluto New Horizons launch go to:
http://www.lockheedmartin.com/data/assets/11819.jpg

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