Lockheed Martin-Built 2001 Mars Odyssey Successfully Launched, Begins Journey To Mars

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The 2001 Mars Odyssey spacecraft, designed and built by Lockheed Martin Space Systems - Astronautics Operations for the National Aeronautics and Space Administration (NASA) and Jet Propulsion Laboratory (JPL), was launched successfully today and is on its way to the planet Mars. Liftoff occurred at 11:02 a.m. EDT aboard a Delta II launch vehicle from Launch Complex 17A at Cape Canaveral Air Force Station, Fla.

The 2001 Mars Odyssey is NASA's next mission to Mars and will join the Mars Global Surveyor, also designed and built by Lockheed Martin, in an effort to continue scientific reconnaissance of the planet's surface and explore for signs of water. In addition to designing and building the Odyssey, Lockheed Martin is controlling the Mars Global Surveyor, the 2001 Mars Odyssey and the Stardust spacecraft, in cooperation with JPL, from its facilities southwest of Denver.

"We now have a second spacecraft on its way to Mars that will continue to support NASA's important, long-term vision to explore and understand the Red Planet -- with science instruments that will greatly expand our understanding of our neighbor planet," said G. Thomas Marsh, president and general manager of Lockheed Martin Space Systems - Astronautics Operations. "We are extremely proud to be an industry partner with NASA and JPL to further the goals of space exploration and gain a better understanding of our solar system and the universe."

The 2001 Mars Odyssey will reach the Red Planet October 24, 2001, enter an initial elliptical orbit, then perform aerobraking maneuvers for several weeks to place the spacecraft in a lower circular orbit around the planet's poles. Aerobraking uses atmospheric drag to slow the spacecraft into its final orbit, thereby minimizing the weight and fuel required to reach the lower Mars orbit. Once it achieves this orbit, the spacecraft will use its thrusters to settle into a polar, nearly circular orbit averaging 250 miles above the surface. The duration of the 2001 Mars Odyssey's mission is two Martian years (46 Earth months).

While in orbit, the spacecraft will collect data that will be used to analyze the global elemental composition of the planet, search for evidence of ancient hot springs and mineral deposits, survey the radiation environment and provide a communications link with future landers.

Scientists want to understand what happened to what appears to have been signs of surface water on the planet and other geological formations similar to those on Earth. To gather data and send it to Earth for scientific interpretation, the Odyssey will make use of three science instruments: the Thermal Emission Imaging System (THEMIS); the Gamma Ray Spectrometer (GRS); and the Martian Radiation Environment Experiment (MARIE). THEMIS will map the mineralogy and morphology of the Martian surface using a visible wavelength camera and thermal infrared imaging spectrometer. The GRS will achieve global mapping of the elemental composition of the surface and determine the abundance of hydrogen atoms -- most likely contained in water ice -- in the shallow subsurface of Mars. The MARIE will characterize aspects of the near- Mars Deep Space radiation environment as related to the radiation-related risk to human explorers who may visit Mars in the future.

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 is a global enterprise principally engaged in the research, design, development, manufacture and integration of advanced-technology systems, products and services. The Corporation's core businesses are systems integration, space, aeronautics and technology services. Employing more than 140,000 people worldwide, Lockheed Martin had 2000 sales surpassing $25 billion.

For more information about NASA and JPL Mars missions, please visit: http://mars.jpl.nasa.gov/odyssey

For more information about Lockheed Martin Space Systems, please visit: http://www.ast.lmco.com/

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