

Lockheed Martin-Built MAVEN Successfully Placed Into Orbit Around Mars

NASA Spacecraft to Study the Red Planet's Upper Atmosphere

DENVER, Sept. 22, 2014 /PRNewswire/ -- NASA's Mars Atmosphere and Volatile Evolution (MAVEN) spacecraft, built by Lockheed Martin [NYSE: LMT], was successfully placed in orbit around Mars this evening. The spacecraft's flight operations are controlled by a team at Lockheed Martin's Mission Support Area near Denver, Colorado.

Photo: <http://www.lockheedmartin.com/us/news/press-releases/2014/september/0921-ss-maven.html>

Infographic:

<http://www.lockheedmartin.com/content/dam/lockheed/data/space/photo/maven/MAVENInfographic.jpg>

"The spacecraft and navigation teams have concluded that all major subsystems on the spacecraft are healthy and MAVEN is in orbit around Mars," said Guy Beutelschies, MAVEN spacecraft program manager at Lockheed Martin Space Systems. "The entire mission team did a fantastic job getting MAVEN around Mars and soon we'll have the orbiter ready for science observations."

Earlier in the week, final commands were sent to the spacecraft to ready it for orbit insertion. At 7:50 p.m. MDT today, those commands fired the six main engines for a 33-minute burn that slowed the spacecraft by 2,752 mph. This allowed it to be captured by Mars' gravity and placed into an elliptical polar orbit around the planet that is initially 35 hours long.

"This is an immense achievement for NASA and all the MAVEN partner organizations," said Jim Crocker, VP and GM of Civil Space at Lockheed Martin Space Systems. "MAVEN has performed exceptionally well since launch and the flawless orbit insertion is testimony to how well the teams worked together throughout the entire program. NASA now has another healthy orbiter around Mars."

Over the next six weeks, MAVEN will undergo a commissioning phase that includes placing the spacecraft into its final science orbit and deploying and testing its instruments. At the completion of this phase, MAVEN will begin its one Earth-year primary mission.

MAVEN is the first dedicated mission to survey the upper atmosphere of Mars. Mission scientists are seeking to understand how the loss of atmospheric gas to space changed the Martian climate.

MAVEN now joins NASA's Mars Reconnaissance Orbiter and the 2001 Mars Odyssey – both built and operated for NASA by Lockheed Martin – in orbit around the Red Planet.

The spacecraft's principal investigator, Bruce Jakosky, is based at the Laboratory for Atmospheric and Space Physics at University of Colorado, Boulder. The university provided two science instruments and leads science operations, as well as education and public outreach, for the mission.

NASA Goddard Space Flight Center in Greenbelt, Maryland, manages the project and also provided two science instruments for the mission. The Space Sciences Laboratory at the University of California at Berkeley provided four science instruments for MAVEN. NASA's Jet Propulsion Laboratory in Pasadena, California, provides navigation and Deep Space Network support, and Electra telecommunications relay hardware and operations.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 113,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's net sales for 2013 were \$45.4 billion.

More information about MAVEN can be found at:

- <http://www.lockheedmartin.com/maven>
- <http://www.nasa.gov/maven>
- <http://lasp.colorado.edu/maven/>

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