

Lockheed Martin And NASA Perform Spectacular Flyby Of Comet Tempel 1

DENVER, Feb. 15, 2011 /PRNewswire/ -- NASA's [Stardust-NExT](#) spacecraft made a Valentine's Day deep-space rendezvous with an object it had been seeking for the past four-and-a-half years. The Lockheed Martin (NYSE: LMT)-built spacecraft flawlessly executed its mission and performed a flyby of comet Tempel 1 at 9:39 p.m. MT yesterday.

Stardust made its closest approach of the nucleus of the comet at a distance of 111 miles (178 km) and was traveling a relative speed of 24,300 mph (10.9 km per second). During the encounter, the NavCam instrument took 72 images of the comet. The closest images can be viewed at <http://www.jpl.nasa.gov/news/stardust>. In addition, two other instruments aboard the spacecraft collected data on the composition, size distribution and flux of dust emitted into the coma—the cloud of dust and debris surrounding the comet.

"This little spacecraft has really been around the block. Even though the odometer is high and the fuel is low, it did everything we asked of it and the results are visually amazing," said Allan Cheuvront, Lockheed Martin Space Systems Company program manager for Stardust-NExT. "Most of our team has been working with the spacecraft since launch and their dedication to this project was clearly evident today."

During yesterday's encounter, and for the previous 12 years, Lockheed Martin provided mission flight operations for the spacecraft. At its Mission Support Area (MSA) near Denver, engineers monitor the health and safety of the spacecraft, develop, test and send commands via the Deep Space Network, and plan mission activities. Spacecraft navigation and project management are handled by the Jet Propulsion Laboratory.

"The NExT mission is a shining example of an innovative and affordable solution that is bringing us outstanding science," said Jim Crocker, vice president of Sensing and Exploration Systems at Lockheed Martin Space Systems Company. "The team was able to fly Stardust through deep space and send back amazing images and science data, all at a small fraction of the cost of a new, ground-up mission."

On Feb. 16, the project moves into the departure phase where the NavCam will take an image of Tempel every five minutes for five days and then every 12 minutes for the following six days as the comet recedes into the distance. Several weeks after the flyby, the Stardust spacecraft will be decommissioned.

Stardust-NExT is a low-cost mission that will expand the investigation of comet Tempel 1 initiated by NASA's Deep Impact spacecraft. JPL, a division of the California Institute of Technology in Pasadena, manages Stardust-NExT for the NASA Science Mission Directorate, Washington, D.C. Joe Veverka of Cornell University, Ithaca, N.Y., is the mission's principal investigator.

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 132,000 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 2010 sales from continuing operations were \$45.8 billion.

More information about Stardust can be found at:

- <http://stardustnext.jpl.nasa.gov/index.html>
- <http://www.lockheedmartin.com/products/StardustNExT>

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