

# Lockheed Martin Powers Up Orion Crew Module

*Orion Team Progressing Toward Exploration Flight Test-1*

PR Newswire

DENVER

DENVER, Oct. 28, 2013 /PRNewswire/ -- For the first time, Lockheed Martin [NYSE: LMT] and NASA engineers powered on the Orion crew module at Kennedy Space Center last week. The test successfully demonstrated the crew module avionics were integrated properly and are in good health.

Photo: <http://www.lockheedmartin.com/us/news/press-releases/2013/october/1028-ss-orion.html>

During the test, operators in the Test Launch and Control Center (TLCC) introduced software scripts to the crew module's main control computers via thousands of wires and electrical ground support equipment. During this process, the foundational elements, or the "heart and brains" of the entire system were evaluated. The main computers received commands from the ground, knew where to send them, read the data from different channels, and successfully relayed electrical responses back to the TLCC.

The crew module power systems will continue to undergo testing for six months as additional electronics are added to the spacecraft.

This critical milestone brings together hundreds of separate electronic elements that have been designed, built, and tested by dozens of companies across the country involved in the Orion program.

"This spacecraft is capable of taking humans farther into space than they've ever gone before," said Cleon Lacefield, Lockheed Martin program manager for Orion. "For over a year, the team has been developing, testing, and installing critical equipment to the crew module, which has now been shown to integrate flawlessly—it's an incredible engineering achievement."

The Orion Multi-Purpose Crew Vehicle is NASA's first spacecraft designed for long-duration, human-rated, deep space exploration. Orion will transport humans to interplanetary destinations beyond low Earth orbit, such as asteroids, the moon and eventually Mars, and return them safely back to Earth. Lockheed Martin is the prime contractor to NASA for Orion, and is responsible for the design, build, testing, launch processing and mission operations of the spacecraft.

About one year from now, Orion will complete its first mission. Exploration Flight Test-1 (EFT-1) will launch an uncrewed spacecraft from NASA's Kennedy Space Center 3,600 miles beyond low Earth orbit. That same day, Orion will return to Earth at a speed of approximately 20,000 mph for a splashdown in the Pacific Ocean. EFT-1 will provide engineers with critical data about Orion's heat shield, flight systems and capabilities to validate designs of the spacecraft before it begins carrying humans to new destinations in the solar system.

Headquartered in Bethesda, Md., Lockheed Martin is a global security and aerospace company that employs about 116,000 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 2012 were \$47.2 billion.

More information about Orion can be found at:

- <http://www.nasa.gov/exploration/systems/mpcv/index.html>
- <http://lockheedmartin.com/us/products/orion.html>

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