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Chereck '04 Part of Team that Built Orion Spacecraft

Successful Flight Lays Foundation for Future NASA Deep Space Missions

Dec. 5, 2014

Andrew Chereck '04, a senior systems engineer at Lockheed Martin Space Systems Co., was among the employees working on the Lockheed Martin-built Orion spacecraft, which completed its first test flight of NASA's deep space exploration capsule on Dec. 5.

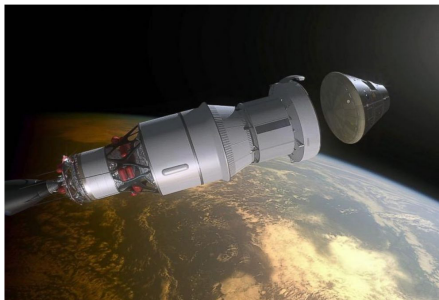
Orion orbited the Earth twice, reaching speeds of 20,000 miles per hour and traveling through belts of intense radiation before enduring a fiery, 4,000 degree Fahrenheit re-entry into Earth's atmosphere.

"Orion is going to push the boundaries of scientific discovery, and for the men and women of Lockheed Martin who have worked tirelessly for the last six years to make this test possible, it's an honor to be a part of this moment in history," said Mike Hawes, Lockheed Martin vice president and Orion program manager.

During re-entry, Orion's heat shield withstood temperatures twice as hot as molten lava. Protection from the extreme heat of re-entry is critical for keeping astronauts safe on future deep space missions. A launch abort system, a service module, protective panels, and a forward bay cover successfully jettisoned from the spacecraft at predetermined times during the flight.



As Orion senior systems engineer, Andrew Chereck '04 worked on projects including vehicle design and system integration.



Orion orbited the Earth during its test flight.

Twice during the flight, Orion traveled through the Van Allen belt, a layer of intense radiation located above Earth's atmosphere. That will help engineers measure the effect of deep space radiation on both astronauts and on-board electronics. Orion's 11 parachutes deployed in stages, slowing the spacecraft from a 20,000 mph re-entry to 20 miles per hour at splashdown in the Pacific Ocean.

"Throughout the flight we recorded data from the spacecraft, and later this month, when it arrives back to Kennedy Space Center, we'll pull select components off the spacecraft to include in our overall analysis," added Hawes. "The insights we'll gain from today's flight are invaluable for Orion's future."

Chereck majored in physics at IWU and later received a Master of Science in Aerospace Engineering at the University of Colorado at Boulder. He has also earned a Certificate in System Architecture and System Engineering from Stevens Institute of Technology. He joined Lockheed Martin in 2007. As Orion senior systems engineer, Chereck worked on projects including vehicle design, system integration, subsystem requirements and wire harness design and integration.