Orion's Exploration Design Challenge Winner Announced

Radiation Experiment to Fly into Space on Exploration Flight Test-1

PR Newswire
WASHINGTON

WASHINGTON, April 25, 2014 /PRNewswire/ -- After a year-long competition among the nation's high schools, evaluators from NASA, Lockheed Martin [NYSE: LMT], and the National Institute of Aerospace (NIA) have selected Team ARES from the Governor's School for Science and Technology in Hampton, Va. as the winner of the Exploration Design Challenge. The winner was chosen from a group of five finalist teams announced in March 2014.

The Challenge was developed to engage students in science, technology, engineering and math by inviting them to help tackle one of the most significant dangers of human space flight—radiation exposure.

Speaking at the U.S.A Science and Engineering Festival, Lockheed Martin Chairman, President and CEOMarillyn Hewson said, "The Exploration Design Challenge has already reached 127,000 students worldwide – engaging them in real-world engineering challenges and igniting their imaginations about the endless possibilities of space discovery."

"This is a great day for Team ARES– you have done a remarkable job," said NASA AdministratorCharles Bolden, who helped announce the winning team. "I really want to congratulate all five of our finalists. You are outstanding examples of the power of American innovation. Your passion for discovery and the creative ideas you have brought forward have made us think and have helped us take a fresh look at a very challenging problem on our Path to Mars."

The winning team's design received the highest radiation protection score during an online simulation of radiation exposure. They also demonstrated evidence of additional research outside of the material provided, and included additional information about the materials and estimated cost for their experiment.

Team ARES will now work with the NASA and Lockheed Martin spacecraft integration team to have their experiment approved to fly in space. When the equipment is approved, Lockheed Martin engineers will install it onto Orion's crew module. Later this year when Orion launches into orbit during Exploration Flight Test-1 (EFT-1), Lockheed Martin will host Team ARES at Kennedy Space Center in Florida to watch their experiment launch into space.

During EFT-1, Orion will fly through the Van Allen Belt, a dense radiation field that surrounds the Earth in a protective shell of electrically charged ions. Understanding and mitigating radiation exposure during Orion's test flight can help scientists develop protective solutions before the first crewed mission. After EFT-1, the students will receive data indicating how well their design protected a dosimeter, an instrument used for measuring radiation exposure.

Students in grades K-12 from around the world can still be part of Orion's first flight by completing a radiation shielding activity that can be found online at www.nasa.gov/education/edc . Students who complete the activity by June 30, 2014 will have their names flown on Orion.

Headquartered in Bethesda, Md., 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.

Media Contact:
Allison Rakes; (240) 364-4367; allison.m.rakes@lmco.com

For more information about Orion visit:
http://www.nasa.gov/orion
http://lockheedmartin.com/orion

For more information about the EDC visit:
http://www.nasa.gov/education/edc/

Follow the conversation on Twitter with #radshield

SOURCE Lockheed Martin

---

https://news.lockheedmartin.com/2014-04-25-Orions-Exploration-Design-Challenge-Winner-Announced