

Technology

Student Lunar Race Car Design Challenge Contest Names Winners

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Final designs of the winning team
Credit: Moon Mark

HOUSTON—The sponsors of a global student contest to virtually design small lunar race cars have chosen four winners. Two of the winners met or exceeded the technical specification to participate in a planned actual 2021 race on the rugged lunar terrain, according to the sponsors, Moon Mark and Intuitive Machines.

Moon Mark is a multimedia entertainment and education content company. Intuitive Machines is a lunar launch services company. The Lunar Race Car Design Challenge was announced in May, in part to creatively address the isolation due to the coronavirus pandemic experienced by high school students proficient in science, technology, engineering, the arts and mathematics.

The virtual design winners were selected from 35 teams of contenders in grades nine through 12 from 11 different countries. Each prevailed in one of four categories. They are the ILSTAR team from Shanghai, China, tops in lunar viability; Team Atlas from Buenos Aires, Argentina, best in racer body style; Team Blue Pride from Philadelphia, No. 1 in commercial application; and Team Nano's Clan, also of Buenos Aires, first for creativity in reaching its audience.

Working virtually, the competitors were required to produce 3-min. videos outlining their race car concepts, one

per week for four weeks. Each winning team received a \$1,000 prize in the form of a donation to a charity of its choice. They were judged by a 25-member panel of experts from around the world who have professional backgrounds in aerospace, technology, engineering, motorsports, and entrepreneurship.

Two of the teams, China's ILSTAR, with its entry resembling a military armored vehicle; and Argentina's Team Atlas, with its all-terrain vehicle design; were singled out by the judges for meeting or exceeding technical specifications needed to actually race on the Moon. But that does not yet mean they will. They still must compete again.

The sponsors are aiming for early next year to raise the curtain on the Moon One challenge. It is a follow-on that will lead to the assembly of actual small lunar race car hardware, Moon Mark spokeswoman Marianne Barrea said. The top two selections are to be launched to the Moon and compete.

Houston-based Intuitive Machines has been contracted through NASA's \$2.6 billion, 10-year Commercial Lunar Payload Services initiative to launch agency-selected science and technology payloads to the lunar surface. IM-1 is to launch on Oct. 21, 2021, and land at the Moon on the Ocean of Storms.

The company's Nova-C lander is to deliver five NASA payloads selected by the agency in January 2020. This includes the automated Precision Landing and Hazard Avoidance landing system, as well as the two finalists in next year's fast-paced Moon One challenge. As Nova-C descends through 30-m altitude, mechanical articulating arms on the lander are to eject a sphere containing high-definition cameras with a 360-deg. field of view. Once on the Moon, the mechanical arm is to deploy the two racers, which are to sprint around the camera sphere and back.

"When we issued this last-minute challenge to students homebound by the global pandemic, our goal was to offer a unique, fun project focused on space commercialization," said Mary Hagy, founder and CEO of Moon Mark. Her statement was part of the announcement revealing the four over-all winners, including the top two technical designs.

"That two teams created technical designs within four weeks that could actually race on the Moon is thrilling,"

Hagy said. “Certainly we have validated that our competitors for our 2021 Mission, who actually build the cars that will race, will have what it takes to achieve the defining moment of their generation.”



Mark Carreau Mark is based in Houston, where he has written on aerospace for more than 25 years. While at the Houston Chronicle, he was recognized by the Rotary National Award for Space Achievement Foundation in 2006 for his professional contributions to the public understanding of America's space program through news reporting.