

The 2008 Great Moonbuggy Race

April 8 2008



These students from Canada's Carleton University in Ottawa, Ontario, scored a third-place win in the college division of NASA's 15th annual Great Moonbuggy Race.

Not one of the participants in NASA's 2008 Great Moonbuggy Race was old enough to have seen the 1969 movie, *Those Daring Young Men in Their Jaunty Jalopies*. Nevertheless, the racers all looked like stars of that film as they careened about the simulated lunar terrain race course in a motley variety of strange vehicles.

These high school and college students, representing 20 states, Puerto Rico, Canada, Germany and India, were having a blast in their home-made moonbuggies. They were spinning out in "moondust" and rumbling over "craters" at the US Space and Rocket Center in Huntsville, Alabama, on April 4th and 5th, competing to traverse the 0.7-mile course faster than any other team.

The two-person crews had to first assemble their odd conveyances as part of the race before setting off from the starting line and competing against the clock on a solo run. Course challenges included obstacles like craters, rocks, hardened lava ridges, inclines, lunar soil and -- one thing never found on the moon -- a gullywasher of a rainstorm. Amazingly, most of the vehicles held up well enough to finish their runs, and a few of the crews actually did so with no penalties at all, whizzing across sandpits and the like as adeptly as the drivers in that 1969 movie they never saw.

While awaiting their turns on the track, crews worked on their buggies out in the parking lot. A Fairhope, Alabama, team was elevating the use of duct tape to high art, securing all the required parts (simulated radios, simulated cameras, simulated batteries, etc.) in place.

"Our buggy isn't as fancy as some of the others, but we're proud of it," said one of the Fairhope crewmembers. Indeed, his buggy went on to make a respectable run, all in one piece. (Is it any wonder?)

Dr. Paul Shiue, faculty advisor for the Memphis, Tennessee, Christian Brothers University crew, was on hand to support his team. He laughingly called duct tape their "best engineering tool."

Several teams based their buggies on junk yard parts, resulting in (predictably) tough vehicles: "One of the high school teams badly bent both rims on one side of their buggy in a leap over obstacle #3, then blew out the intertube with a bang on one of those wheels a few obstacles later," describes onlooker and NASA physicist Dennis Gallagher. Despite all that, "they managed to finish the race."

"Meanwhile, a team from India made do without critical parts that never arrived in a lost luggage bag," he continues. "They also forgot their safety helmets, goggles, and gloves, but another team gave them theirs.

One of the event highlights is how teams are willing to share their knowledge, tools and parts."

Cooperation, seat-of-the pants ingenuity and serious engineering know-how were on full display--just as they were 30+ years ago when NASA engineers created the original Lunar Roving Vehicle for the Apollo program.

The moonbuggy of that era had to travel in breathtaking vacuum across a dusty, bumpy landscape, in temperatures exceeding 200 degrees Fahrenheit with very little gravity ($1/6$ g) to hold it down. Weighing only about 450 pounds on Earth, or just 75 pounds on the Moon, the moonbuggy could carry up to 1000 Earth-pounds -- more than twice its own weight. As if that wasn't enough, it also had to fit in the tight confines of the lunar lander. Designers made it fold up (a bit like a Transformer toy) for the voyage to the moon and easily unfold for adventure when the lander descended to the lunar surface. All in all, the original moonbuggy was a nice little ride!

Here on Earth, in the 2008 Great Moonbuggy Race, all the "daring young" men and women, winners and losers alike, seemed to have fun, and their vehicles were remarkably well constructed. Erie High School Team II from Erie, Kansas, won the high school race, charging through the course in a mere 3 minutes and 17 seconds. The college winner was Evansville University from Evansville, Indiana, with an impressive time of 4 minutes and 25 seconds.

And they didn't even use much duct tape.

Source: Science@NASA, by Dauna Coulter

Citation: The 2008 Great Moonbuggy Race (2008, April 8) retrieved 25 June 2024 from <https://phys.org/news/2008-04-great-moonbuggy.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.