

Countdown: America's No. 1 solar car ready to race the world

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University of Michigan solar car Quantum driving in Australia. The World Solar Challenge begins Oct. 16. Credit: Evan Dougherty

(PhysOrg.com) -- With a cutting-edge solar car, an advanced strategy and an intrepid 16-student race crew, the University of Michigan's national champion solar car team is ready for the upcoming World Solar Challenge. The 1,800-mile international contest starts on the north shore of Australia in Darwin on Oct. 16.

During the past two years of intense preparation, the team shaved 200 pounds off its 2009 car by weighing the vehicle bolt by bolt and streamlining nearly every part. They improved its [aerodynamics](#) by an estimated 30 percent. They tested in practice races across Michigan and in Australia. And they strategized with computer scientists and sailboat racers to come up with more accurate weather forecasting models.

All they can do now, for the most part, is wait. And for some, that's harder than it sounds.

"I just want to race!" said Chris Hilger, the team's business manager, a junior in chemical engineering.

The [World Solar Challenge](#) is a grueling four-day race across the desert. Drivers rotate in four-hour shifts in a car that's not designed for comfort. The [cockpit](#) can exceed 100 degrees. They sleep in tents on the side of Stuart Highway. U-M's team is one of 37 competing from across the globe this year.



University of Michigan solar car team race crew member Ethan Lardner works on Quantum during a control stop on a practice race in Australia. Credit: Evan Dougherty

Michigan has finished third in this world race four times, most recently in 2009. That year's model, Infinium, also nabbed a third consecutive national win for the team, which has six in all.

While the students are aiming for a world title with this year's Quantum, they know the competition will be tough. And they are proud of their accomplishments so far.

"The team has done some pretty incredible things this year. We took on some ambitious designs and processes. We're pushing the limits of what's possible," said Rachel Kramer, the team's race manager, a junior neuroscience student.

"No matter how the race turns out, we can walk away knowing we've revolutionized how the team designs, builds and races solar cars."

Provided by University of Michigan

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