Aurora in the Global Green Challenge 2009
Report Two
19 October 2009

We had another beautiful day in Darwin. Again, the temperature was around 34 degrees Centigrade, the humidity was reasonable, and an afternoon sea breeze cooled things off later in the day. Unfortunately, these conditions suggested a holiday atmosphere for the Aurora team, leading to a somewhat late start. One carload of team members went off for a restaurant breakfast.

Aurora 101 solar car driver Rebecca Trump obtains more valuable driving time today at the Hidden Valley Motorsports Complex.

Rebecca Trump in Aurora 101 (blue car) and Tom Hunt in Southern Aurora (white car) work through their respective test programs in hot and sunny conditions.

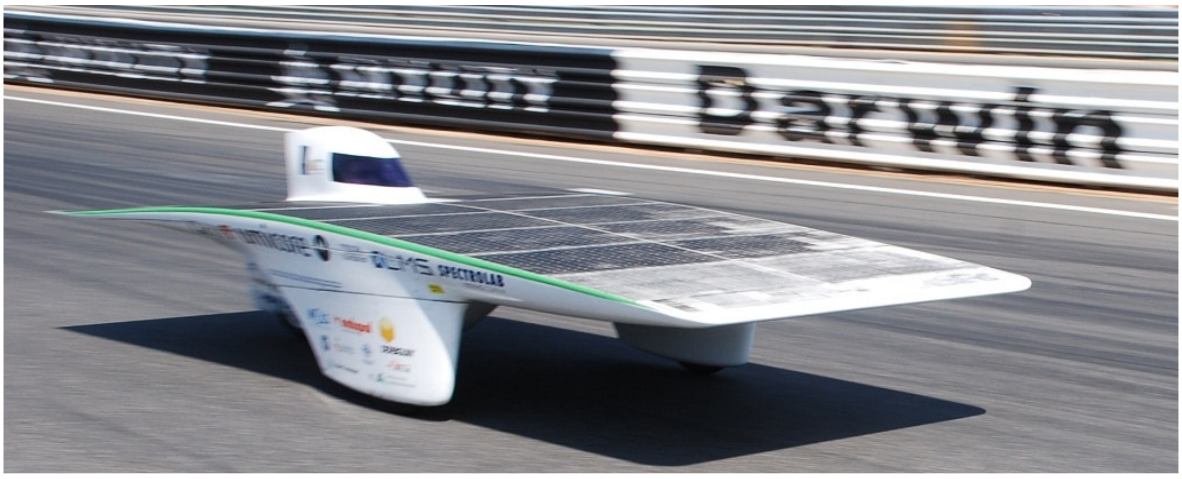
Being better prepared than ever before had its advantages, however, and today was a big day for our new solar car pilots. Aurora 101 and Southern Aurora spent a combined time of about ten hours on the Hidden Valley Motorsports Complex race track.

The action continues in the pits. Paul Jolly, Peter Pudney, and Nick Jones tune Aurora 101's solar panel power point trackers, while Raj Shetgar and Satish Thimmaiah calibrate its new battery management system.

Between on track test sessions Peter Pudney and Nick Jones, along with the support of several other team members, conducted thorough solar panel testing and tuned the associated circuitry, obtaining what is estimated to be an extra 50 Watts of energy from each car's solar panel. It was a worthwhile effort.

Meanwhile Raj Shetgar and Satish Thimmaiah continued to refine the new battery management systems in each solar car. These systems provide Aurora's race strategists with detailed information on the performance of each car's battery pack.

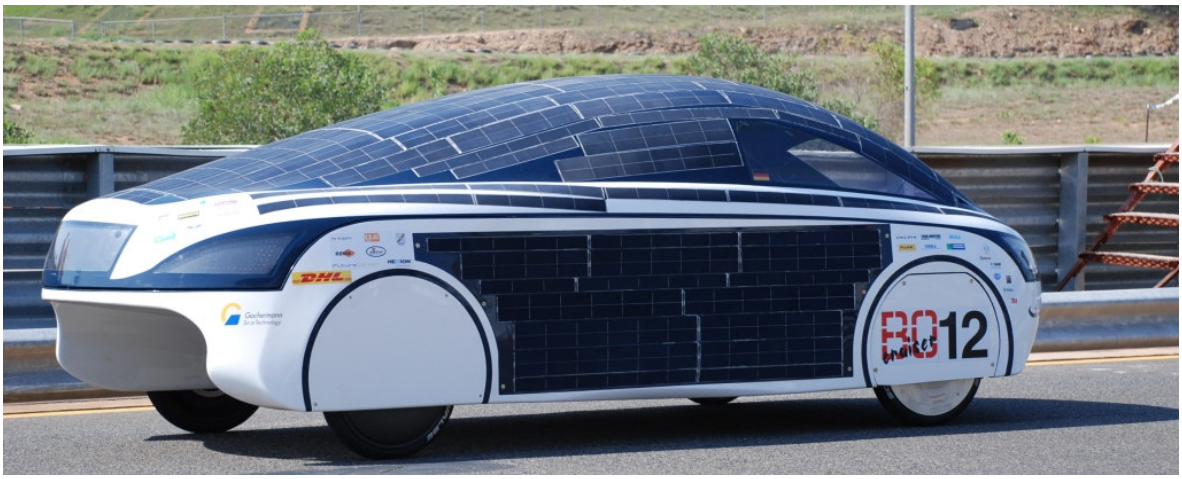
Further information regarding race favourite Nuna's solar panel confirmed their earlier claims that their peak solar cell efficiency is as high as 34%. We have never seen this level of solar cell efficiency before, expecting a peak efficiency of about 28% from space grade solar cells. Also, the Nuna team appears to have fully repaired all of the damage that they sustained during their off road accident two weeks ago.



The Umicore team from Belgium tests their new solar car at speed.

One of the top on track performers today was the new Umicore solar car from Belgium. Like many other teams, they hope to find a way to beat Nuna. Other newcomers included: the

two French teams of Helios and Clermont-Ferrand, a new car from Singapore, one of the two Turkish entries, Massachusetts Institute of Technology (MIT) from the USA, and Australian high school teams from both Kormilda (Darwin) and Leeming (Perth). Additionally, several student groups from high schools including Leeming, Bochum, and Kormilda made visits to the Aurora garage and had their solar car racing questions answered.



Bochum University takes their new car, the BO-Cruiser, out on the race track in Darwin for the first time.

The most remarkable car, however, was the BO-Cruiser from Bochum University in Germany. The BO-Cruiser can seat up to three people, has four wheels, and from some angles looks like an Audi. This car represents a great next step towards bringing solar cars to a dealer near you.

Global Green Challenge Event Director Chris Selwood and Chief Safety Officer Peter Schloitte passed on the news of recent race participant withdrawals, including two teams from India, one from South Australia TAFE, the Taiwanese Apollo V, and the Arctic Fox from the UK. Still, we expect 34 starters from 16 countries.

We anticipate the arrival of UNSW from Sydney, the University of Michigan from the USA, Tokai University from Japan, and Cambridge University from the UK. Tomorrow will be an interesting day.