University of Minnesota Solar Vehicle Project

Erick (Rickey) Sipila

- 4th year student in Industrial and Systems Engineering at the University of Minnesota
- UMNSVP Director of Operations
- CTS Front Desk
Background
- Summer of even years
- Route is always different
- Usually ~2,000 miles (recently)
- ~15 teams competing
- Inspection is much more strict
- Began 28 years ago

- Fall of odd years
- Route is always the same
- 3000 km (1864 miles)
- ~40 teams competing
- Logistics are much more difficult
- Began 31 years ago
- We have competed in four events
Two Major Classes of Solar Cars

**Challenger Class**
- One seat
- Built for maximum speed
- Highly aerodynamic
- Highly impractical for consumers
- Best time on race wins

**Cruiser Class**
- Two or more seats
- Built for efficiency and practicality
- Much more practical for consumers
- Score based on efficiency AND practicality
- Speed is not in equation
Challenger Class

Centaurus III with several other Challenger Class Solar Cars

Cruiser Class

BWSC 2017 Cruiser Cars:
Eos II in middle of third row.
How does a Solar Car Work?

- Solar Energy is collected through solar arrays on the roof of the car
- The energy is stored in a lithium ion battery
- Electric motors use this energy to drive the car with maximum efficiency
- Car needs to be as aerodynamic and lightweight as possible to sustain energy

28 years of Innovation
Strategy
Solar Cars Becoming Road Legal?

Car #14 - “Freya I”

- This year the project will be making its best car yet: Freya I
- Will be unveiling by the end of Spring
- Follow us on social media for updates
  - @umnsvp
  - umnsvp.org
Questions