



**POLITECNICO**  
MILANO 1863

# YCM Offshore Solar Class

# Stato dell'arte: YCM Solar Boat Challenge

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Started in 2014 under the impulse of Solar One races, the Solar Electric Challenge has been established to promote solar power technologies, innovation and sustainable energy alternatives to keep our oceans and environment clean providing teams from all over the world the opportunity to compete and showcase their design, technological and sporting strengths in a world class international solar powered boat racing event.

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## Categories

- A. Challenge class vessels
- Open class vessels (including Top Class and V20)

**All vessels must be single pilot vessels**

## Maximum dimensions per class:

Category	A class	Open Class
Length [m]	6.0	8.0
Width [m]	2.4	2.6

## General Requirements

All vessels must be fitted with solar panels, which will serve as the sole source of energy.

No prescriptions apply to the use of materials with the exception of the following limitations:

The use of materials and constructions that might serve as sails is not allowed.

The use of materials that may directly pollute the environment when in contact with water is not allowed.

The use of energy storage systems, other than batteries for storing electrical energy, is allowed (e.g. flywheels, super capacitors, etc.).

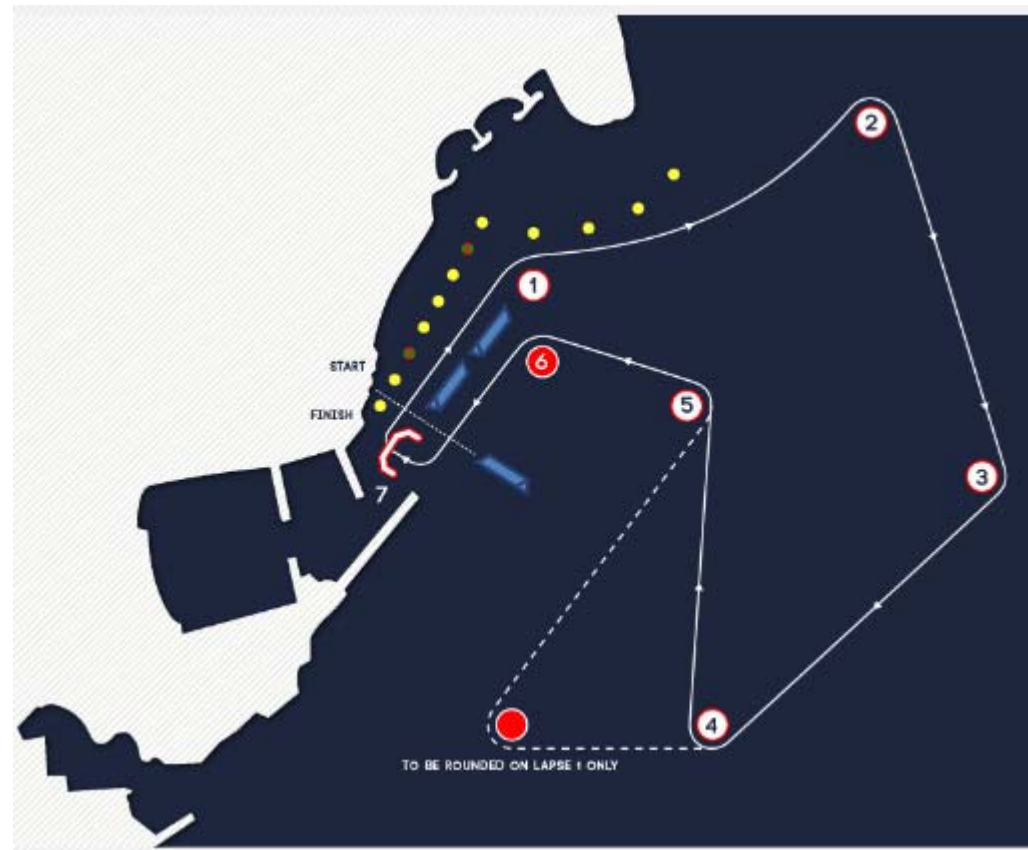
*The total on board energy storage capacity is limited to 1.50 kWh for the A Challenge class and the Open Class and 1.75 kWh for the V20.*

*This capacity includes the storage capacity of batteries for storing electrical energy.*

## Race Format and Race Courses.

### 1) The Fleet Race

Each Team's Boat shall compete in its Class in a mass start fleet race over a closed course about 0.5 nautical mile in length.

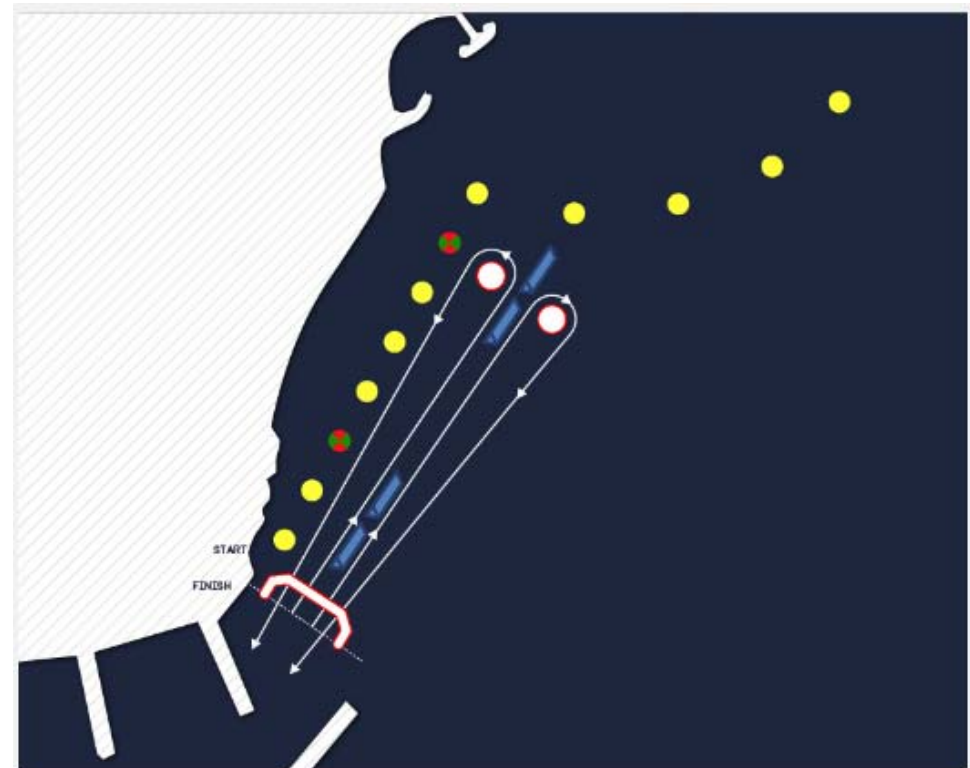


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## 2) “One-On-One” Sprint Championship Race

Boats in each Class will compete in a “One-on-One” knock-out Sprint Championship Race (the “Sprint Race” on the format of the UIM Match race) on a course of approximately 0.1 nautical miles long.

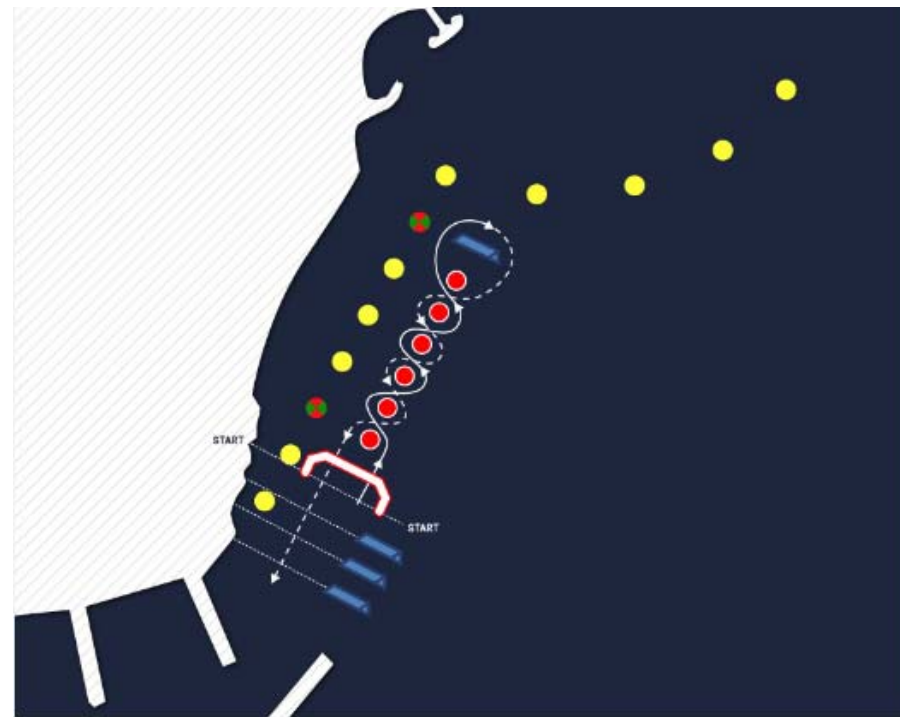


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## 3) Slalom Races

Each Team's Boat is required to complete a timed run on a slalom race course (approx. 0.2 nautical miles)





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## Entry List 2016 – Solar Boat Challenge

### A CLASS

• HAN SOLARBOAT	NETHERLANDS
• W.U.T SOLAR BOAT TEAM	POLAND
• ANTWERP MARITIME ACADEMY	BELGIUM
• DUTCH SOLAR BOAT	NETHERLANDS
• SUNFLARE SOLARTEAM	NETHERLANDS
• SOLAR TEAM LINDENBORG	NETHERLANDS
• SOLAR TEAM SNEEK	NETHERLANDS

### OPEN CLASS

• CEDARVILLE SEALANDAIRE	UNITED STATES
• SUNDERBIRD	GERMANY
• LIANDON	NETHERLANDS
• <b>TU DELFT</b>	<b>NETHERLANDS</b>
• BME SOLAR TEAM	HUNGARY
• CLAFIS SOLAR BOAT TEAM	NETHERLANDS
• DYNAMIC TEAM	RUSSIA
• VRIPACK SOLAR TEAM	NETHERLANDS
• SOLARTEAM ROCvA	NETHERLANDS



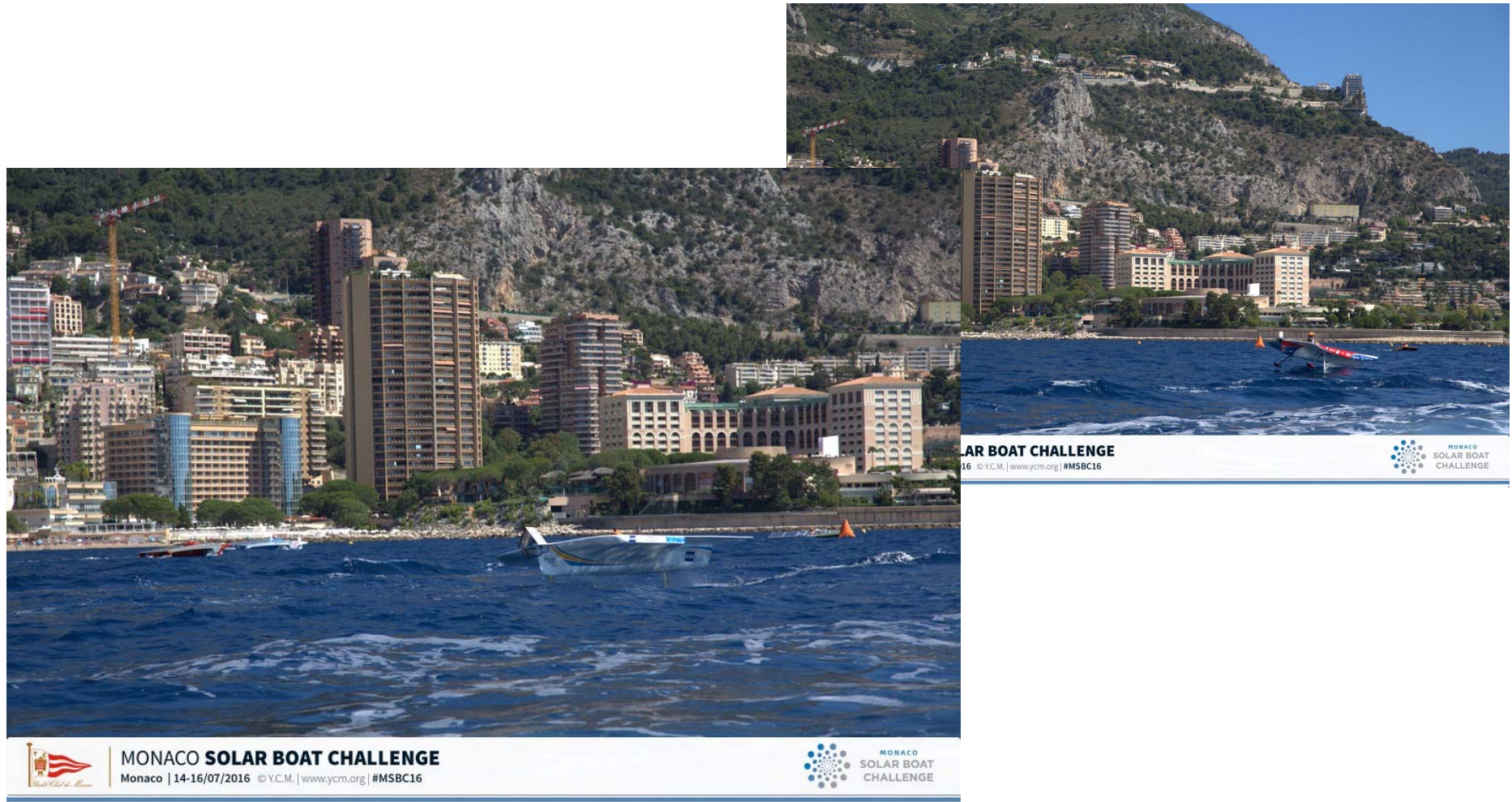
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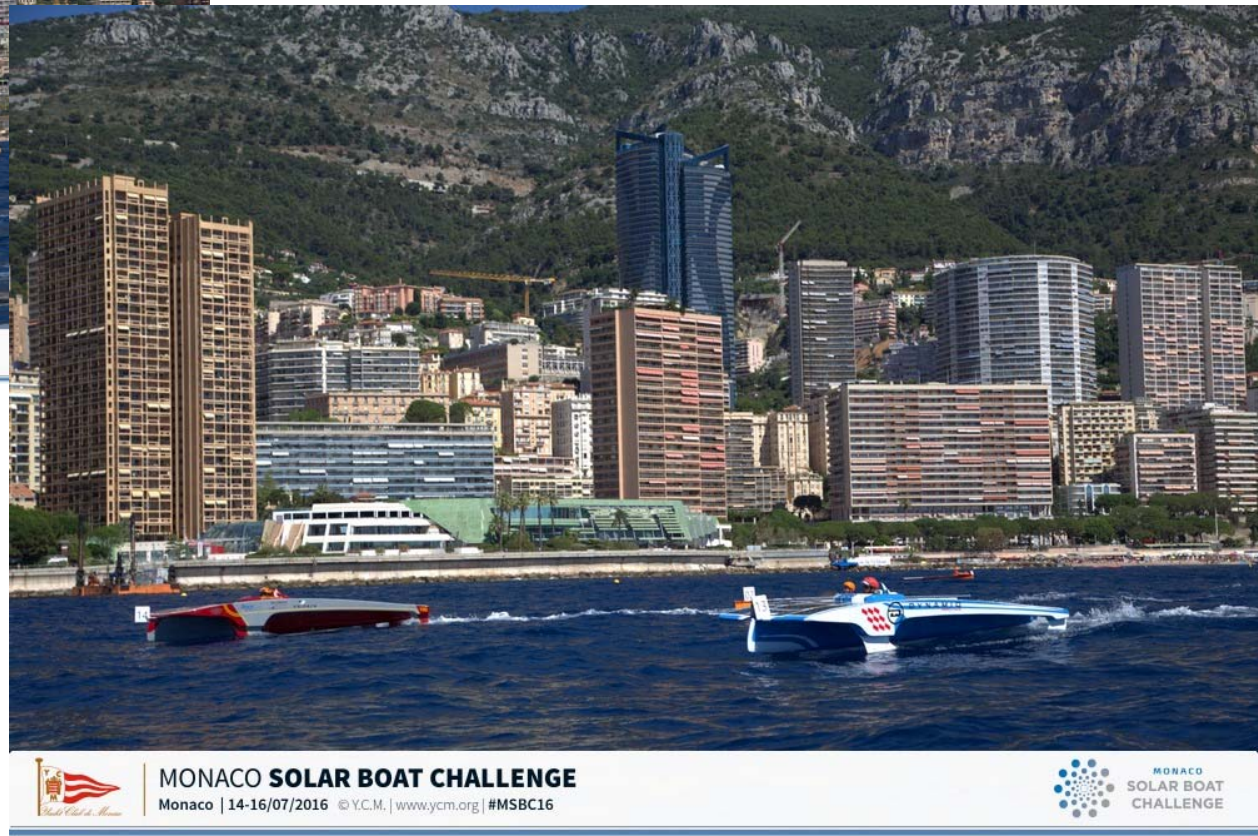
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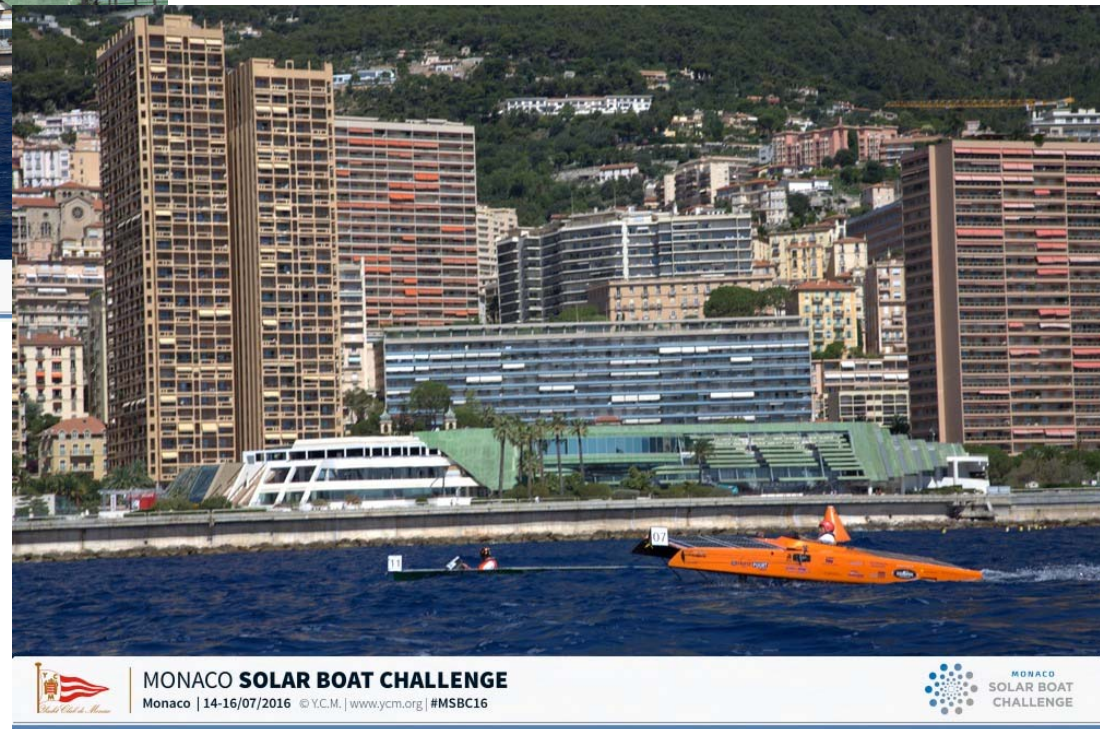
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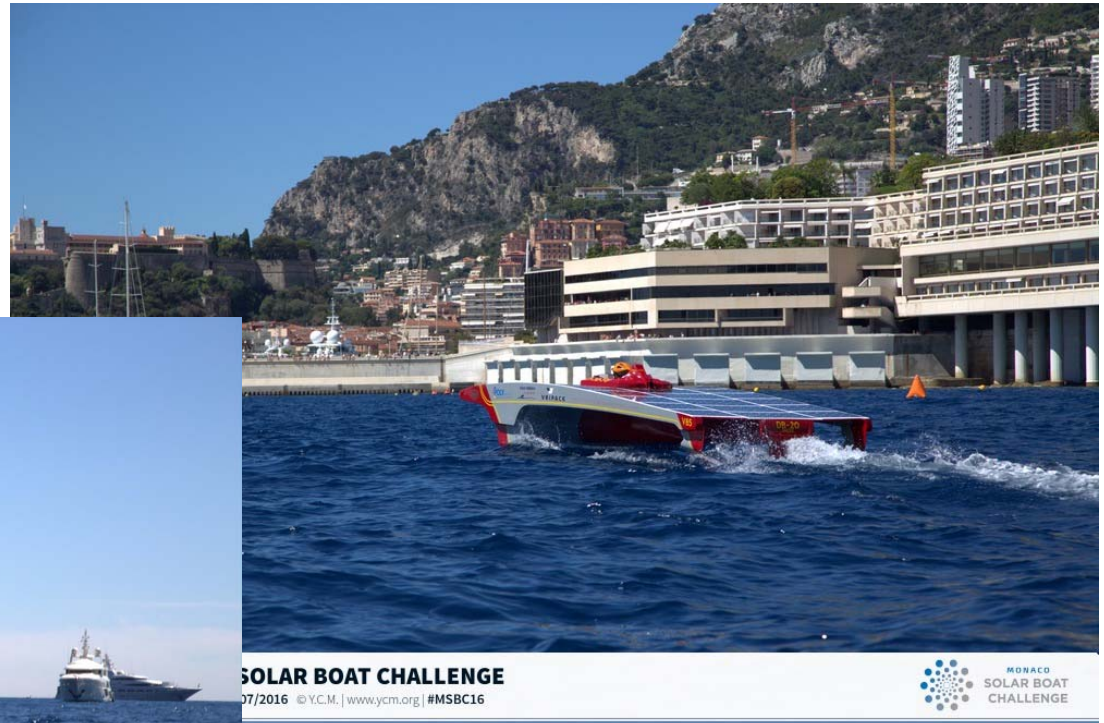
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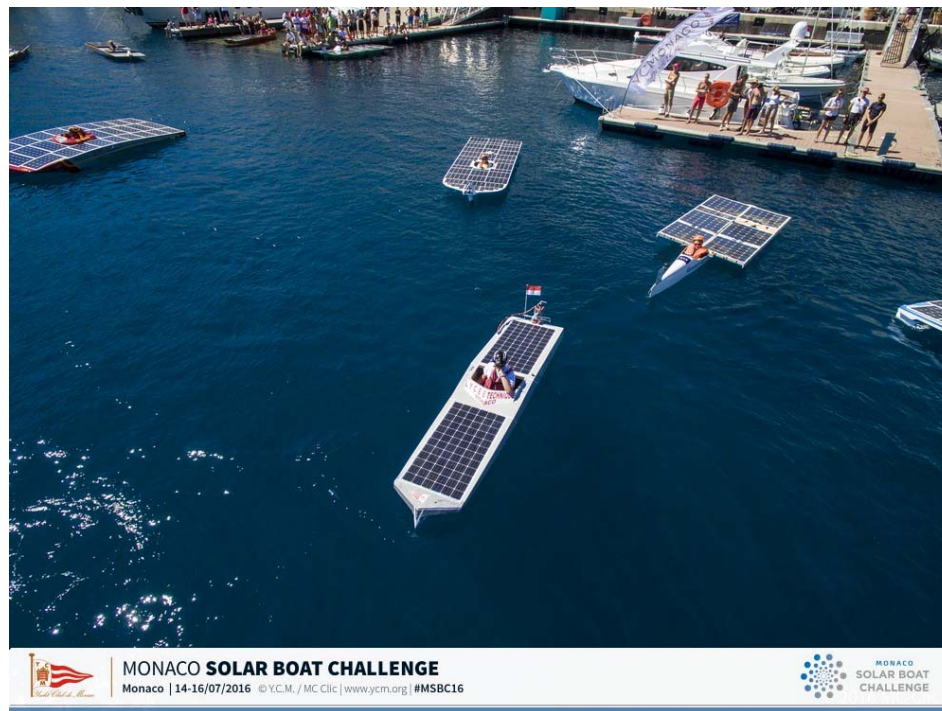
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# 2017: YCM Offshore Solar Class

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The goal of this class is to encourage the development of alternative energy boats that would be suitable for recreational use.

*A 50 NM offshore race* for a new class of solar-powered boats that can accommodate three people and for which the technical specifications have been drawn up in collaboration with the UIM.

*Teams must develop a partnership with a university. Other associations with the industry are encouraged.*

## Maximum Size

Boats length overall shall not exceed *12 meters* (40 feet approx.).

*There is no limit to the width.* Boats that are oversized may request to join the competition but will not be classed.

## Power Source

The power for the boat must come from the sun. *The energy may be stored on the boat in any manner. It is not required for solar cells* or other solar energy generating devices to be located on the boat. They may be located on the dock or other facilities.



## Minimum Payload

Boat minimum payload for the race will be *three passengers* (including the driver) of a minimum of *80 kg each* (correctors may be applied to reach the *320 kg required weight*).

## Standards and Certification

All boats must be up to standard and certified by the builder in accordance to Directive 94/25/EC as amended by Directive 2003/44/EC for Recreational Craft in Category C “Inshore” (*wind force up to and including 6 on the Beaufort scale and a significant wave height up to and including 2 m*).

Boats must send their Declaration of Conformity one (1) month before the start of the race to the organising Authority.