PRESS RELEASE – Rollout

Dübendorf, 6 June 2025

Powering Toward the World Stage with Solar Energy – aCentauri Solar Racing Unveils New Solar Car ‘Silvretta’

What happens when you combine the experience of a 3,000 km journey across Australia with the innovative power of young engineers? The answer is: Silvretta, the second solar car from the aCentauri Solar Racing Team at ETH Zurich, officially unveiled on Friday, 6 June 2025.

Named after the Silvretta mountain range in the Alps, Silvretta stands for technical sophistication, efficiency in every detail, and the quality of Swiss engineering. With aerodynamic drag comparable to that of a standard side mirror on a production vehicle, a solar cell area of 6 m² and a cell efficiency of over 24%, this vehicle sets new standards in efficiency and performance.

Innovation from Experience

After successfully participating in the Bridgestone World Solar Challenge 2023 with their debut vehicle Aletsch, the team reviewed every team structure, component, design, and decision. The race was also moved two months earlier to the Australian winter in August, an additional challenge that pushed the team towards even greater efficiency and teamwork. And that made all the difference: within just one and a half years, Silvretta was completely redesigned, manufactured, and tested from the ground up.

“With Silvretta, we placed an even greater focus on the interaction between aerodynamics and solar performance,” explains Leander Hoffmann, Head of the Aerodynamics Team at aCe. “Using the calculated air resistance, the estimated solar performance, the motor specifications, and race parameters, we were able to predict race times for different vehicle designs and select the optimal design.”

Key Technical Specifications at a Glance

Feature	Value
Name	Silvretta
Year of Manufacture	2024/25
Solar Cell Area	6 m²
Solar Cell Efficiency	> 24%
Battery Capacity	3 kWh
Dimensions (L×W×H)	5.8 m × 1.43 m × 0.96 m
Vehicle Mass	190 kg
Drive System	Radial flux in-wheel motor

The car is primarily made of carbon and glass fibre-reinforced composites. The specially developed chassis has been precisely milled from high-strength aluminium, making it lightweight, stable, and efficient.

The unveiling video of Silvretta is now online:

https://www.youtube.com/live/W1KEg_UJQbI?si=Fg6ggAdOiyQfav_1

More information about the project, technical background, and the team can be found on our website:

https://www.acentauri.ch

About aCentauri Solar Racing

aCentauri Solar Racing is a student association at ETH Zurich competing at the forefront of the global solar car racing scene, driven by a passion for technology, teamwork, and sustainability. Our goal: to make innovation visible, to inspire, and to help shape the future of mobility.