

# Cervélo S5 compared to TT / Tri bikes

Data from the San Diego Air & Space Technology Centre wind tunnel. Test number LSWT 1101, January 2011. All bikes were tested with Foam Dave aboard, all components the same including wheels (except for proprietary parts), and each bike's fastest water bottle configuration.

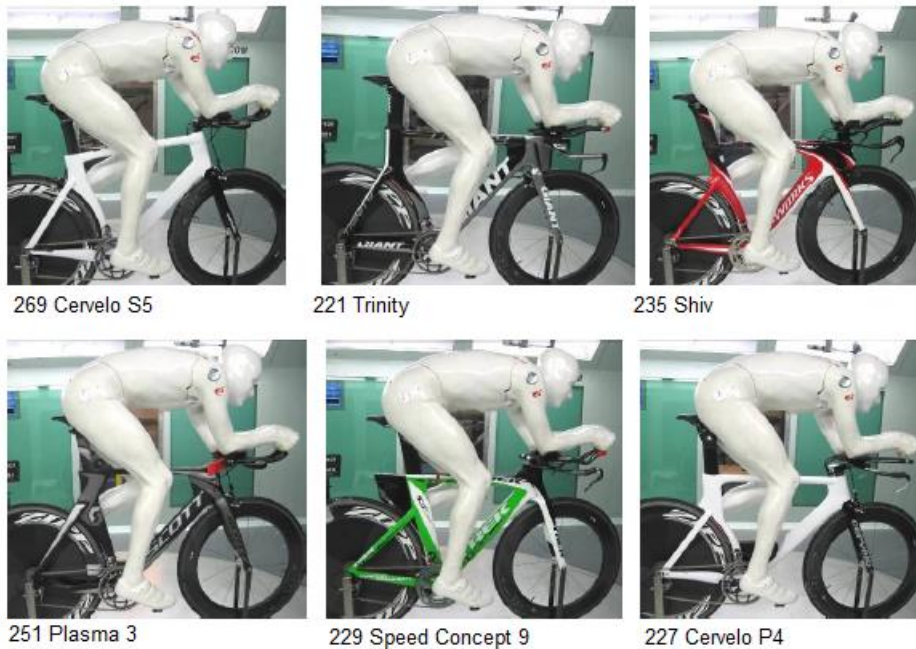


Figure 1 Configuration photos. The number (like 269) is the wind tunnel's run number.

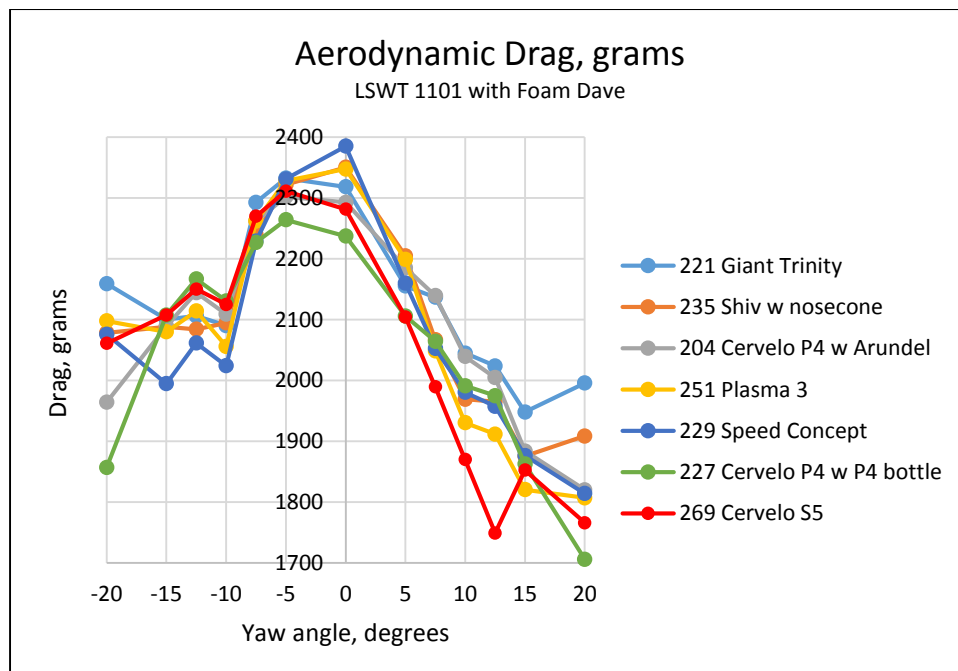


Figure 2 Drag-yaw chart. Aerodynamic drag is on the vertical axis (lower drag is better). Yaw (apparent crosswind angle) is on the horizontal axis, representing crosswinds from the left and right sides of the rider.

The figure above shows that, in general, especially with crosswinds from the rider's right, the Cervélo S5 has the lowest aerodynamic drag of any bike tested at nearly any yaw point. With

crosswinds from the rider's left, the Cervélo S5 has relatively higher drag. More specifically, at low yaw (between perhaps +/- about 7.5 degrees) the S5 and P4 both have especially low drag.

Sometimes comparing a typical drag-yaw chart such as the one above can be too much information, since at any single point a different bike may have similar drag, it's not always easy to see the overall difference. One way to provide a clearer view of the overall aero performance of the different bikes is to average the yaw data. While it loses some granularity, averaging all yaw points into a single number for each bike can simplify the comparison.

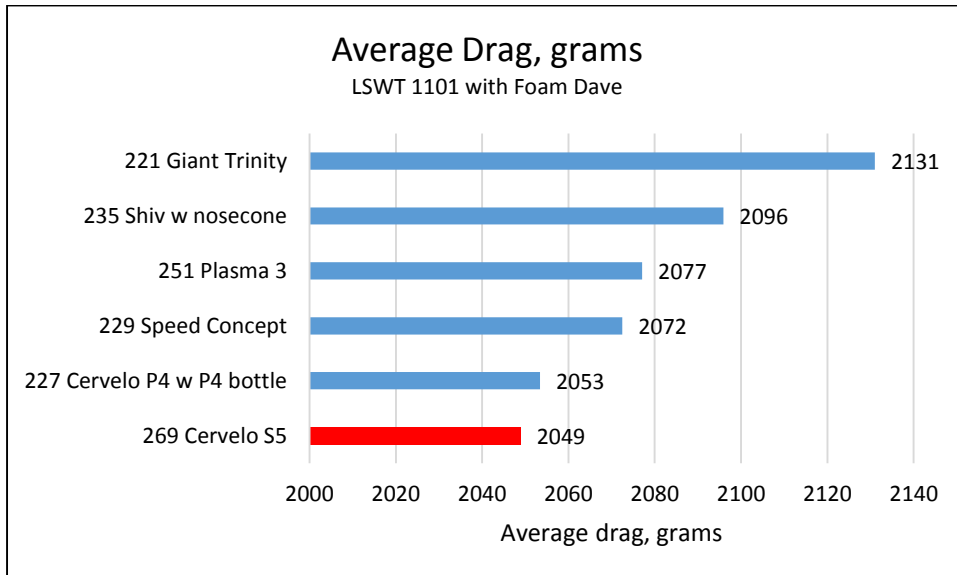


Figure 3 Average drag of the same bikes in the drag-yaw chart above.

The figure above compares the average aero drag of the Cervélo S5 against the same TT or tri bikes as above. The chart shows that, on average, the S5 has about the same aero drag as the P4, and less drag than other TT bikes.

Note: On runs 269 an aero base bar was used on the Cervélo S5 to represent a tri setup. Due to the longer head tube on the S5 than the P4, the handlebars were higher and consequently Foam Dave's position was rotated back slightly compared to the TT bikes. This can be seen in the configuration photos.

END