Perspectives / Tests & Technology

## Commentary on Aerodynamic Drag Area of Cyclists

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Any sport scientist or coach working with competitive cyclists or triathletes will appreciate this excellent piece of work (and associated spreadsheet) by Jim Martin and colleagues. Aerodynamic drag is by far the most important retarding force in both road and track cycling and reducing drag can lead to substantial improvements in performance.

Often little attention is paid to improving a cyclist's aerodynamics, because calculating drag characteristics generally requires expensive wind tunnel testing facilities, which very few athletes have access to. With this spreadsheet all you now need to calculate the cyclist's drag characteristics is a reliable power-measuring device (such as SRM or PowerTap), a few cheap environmental measuring devices, and a suitable cycling venue (and maybe a bit of pa-

tience). Interestingly, a new power measuring device called the <u>iBike</u> uses a calibration roll-down procedure to establish a rider's drag characteristics, which then allows power output to be calculated from speed.

Using Jim's spreadsheet will allow sport scientists and coaches to easily compare drag characteristics between cyclists and, more importantly, allow an assessment of the effects of changing a rider's position on aerodynamics. I have little doubt that the spreadsheet will provide robust calculations of drag characteristics and will become widely used within the cycling-science fraternity.

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