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(recto) Analysis of Racing Motorcycle Performance with Additional Considerations

Regarding the Mozzi Axis

Analysis of Racing Motorcycle Performance with Additional Considerations Regarding the Mozzi Axis

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The aim of this research is the development of techniques for the analysis of data measured in motorcycle races. This analysis should highlight the most difficult parts of the circuits, the rider's skill and effort, the vehicle's performance and the achievement of limit conditions for the vehicle and the tires. Several analysis techniques are presented and applied to manoeuvres carried out by different motorcycles both with dry and wet track. Interesting results are obtained with a method based on the time rate of rotational kinetic energy and a criterion of difficulty is proposed.

Keywords: motorcycle, racing, road test, screw axis