

CP developments: MET significance, Boosted Object Tagging and Others

Tuesday 2 April 2019 16:40 (25 minutes)

This talk will cover a variety of developments from the ATLAS experiment on the performance of the experiment. The definition of the significance of the missing transverse momentum will be discussed, the benefits to searches of using this definition, and how this quantity can be estimated in the re-interpretation of these searches. Identifying boosted hadronically decaying vector bosons, top quarks and Higgs bosons is important in many searches. The methods of how this is achieved, including the use of machine learning, will be described and how the efficiency of these taggers is evaluated in data will be detailed. Additionally other combined performance developments will be mentioned with particular focus on those that could cause complications in re-interpreting ATLAS results - for example the interplay between pile-up suppression techniques and models with long-lived particles.

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