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Inclusive tagging of B-flavour at LHCb [Vidyo]

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One of the most important procedure needed for the study of CP violation in Beauty sector is the tagging of the flavour of neutral B-mesons at production. The harsh environment of the Large Hadron Collider makes it particularly hard to succeed in this task. We present a proposal to upgrade current flavour tagging strategy in LHCb experiment. This strategy consists of inclusive tagging ensemble methods (i.e: the use inclusive information about the event without a firm selection rule), which are combined using a probabilistic model for each event. The probabilistic model uses all reconstructed tracks and secondary vertices to obtain well-determined probability of B flavour at production. Such approach reduces the dependence on the performance of lower level identification capacities and thus has the potential to increase the overall performance.

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