

XVth Quark Confinement and the Hadron Spectrum



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Multiplicity-dependent heavy flavour production at the LHCb experiment

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The production of particles containing heavy quarks (beauty and charm) from proton and heavy ion collisions is extensively studied at the LHCb (Large Hadron Collider beauty) experiment. Studying the effect of multiplicity on the production of particles containing heavy quarks, probes the production mechanism of such particles.

The LHCb experiment is unique in its ability to observe particles containing heavy quarks in the ‘forward’ region ($2 < \eta < 5$), complementing observations in central pseudo-rapidity regions found in the barrel spectrometer experiments (ATLAS, CMS and ALICE) at the LHC.

Through the use of tools like RIVET, the LHCb experiment can coordinate with theorists to further refine and validate event generators using experimental data from such analyses.

In this talk, we will present results from the latest measurements of heavy flavour production performed by the LHCb experiment, pointing out areas where there is scope for improvements in event generators.

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