

J/ψ production as a function of charged-particle multiplicity in pp collisions at $\sqrt{s} = 13$ TeV at forward rapidity with ALICE

In high-energy pp collisions, there can be a substantial contribution from Multi-Parton Interactions (MPI) in particle production mechanisms. In this case, several interactions at the partonic level occur in a single pp collision and this implies a correlation between the particle production and the total event multiplicity. At the LHC energies, MPI might occur at hard momentum scales, thus affecting the heavy- quark production. Such an effect can be investigated by studying the correlations between heavy-flavour production and the total charged-particle multiplicity. In this poster, we will present the preliminary results of J/ψ production as a function of charged-particle multiplicity in pp collisions at $\sqrt{s} = 13$ TeV at forward rapidity ($2.5 < y < 4$) using the data collected by the ALICE detector. J/ψ are reconstructed via $J/\psi \rightarrow \mu^+ + \mu^-$ decay channel using the Forward Muon Spectrometer, while the charged-particle multiplicity is obtained from the Silicon Pixel Detector. Results will be compared with the perturbative Quantum Chromodynamics (pQCD) inspired models.

Summary

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