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J/ψ measurements in pp collisions at $\sqrt{s}$ = 13 TeV using EMCal-triggered events with ALICE at LHC

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The study of the J/ψ production in pp collisions provides important information on perturbative and non-perturbative quantum chromodynamics. The production of the heavy-quark pair can be described perturbatively while its hadronisation into quarkonium state is a non-perturbative process. These processes are not fully understood and additional experimental data are necessary to further constrain the theoretical production models. In this work we report studies of J/ψ production in pp collisions at a centre-of-mass energy of $\sqrt{s}$ = 13 TeV at mid-rapidity with ALICE. The J/ψ are reconstructed via their dielectron decay channel in events where at least one of the decay electrons was triggered on by the Electromagnetic Calorimeter (EMCal). The availability of a high-p_{T} electron trigger enhances the sampled luminosity significantly relative to the available minimum-bias triggered data set and extends the p_{T} reach for the J/ψ measurement.
Additionally, the usage of EMCal for particle identification at high p_{T} ranges provides a very good electron/hadron separation. Using these data, the J/ψ measurement is performed in the transverse momentum interval $5 < p_{\mathrm{T}} < 20$ GeV/c.

List of tracks

Heavy-flavour (open and hidden)

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