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Quarkonia production and elliptic flow in small systems measured with ALICE

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The production of quarkonia in hadronic collisions provides a unique testing ground for understanding quantum chromodynamics (QCD) since it involves both the perturbative and non-perturbative regimes of this theory. As the quarkonia formation is not yet fully understood, a variety of new experimental data serve as new insights and help to constrain the models. Additionally to the inclusive J/ψ production, the ALICE detector can access both the physics of charmonium systems and beauty-quark production since the charmonium can be experimentally separated from the contribution from long-lived weak decays of beauty hadrons. Also, new experimental observables like the angular correlation between J/ψ and charged particles bring new insights to quarkonium production in hadronic collisions. Measurements of the azimuthal correlation structure of emitted particles in high multiplicity proton-proton (pp) collisions can reflect the medium response to the initial collision geometry.
In this contribution, we present new results of the inclusive, prompt and non-prompt J/ψ production in pp collisions at $\sqrt{s} = 5.02$ and 13 TeV. The angular correlation between J/ψ and charged particles in pp collisions at $\sqrt{s} = 13$ TeV will also be shown. Finally, the elliptic flow (v_2) of J/ψ in high multiplicity pp collisions at $\sqrt{s} = 13$ TeV will be presented.

Present via

Online

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