ID de Contribution: **116** Type: **Poster**

System-size dependence of collective phenomena by means of quarkonia measurements with ALICE

mardi 4 juin 2024 19:32 (1 minute)

Quarkonium production has long been identified as one of the golden probes to study the quark-gluon plasma (QGP). The early production of heavy quarks ($c\bar{c}$ and $b\bar{b}$) make quarkonia an ideal probe to investigate the evolution of the hot and dense medium produced in ultra-relativistic heavy-ion collisions. Among many observables, the measurement of azimuthal anisotropies (expressed as elliptic and triangular flows, v_2 and v_3 respectively) of quarkonia has a special role to shed light on the collective behavior of particles within a strongly interacting medium. In particular, the magnitude of the J/ψ elliptic flow measured at the LHC is interpreted as a signature of the charm quark thermalization in a deconfined medium, supporting the scenario of charmonium (re)generation at low p_{T}. Interestingly, the observation of collective-like effects in high-multiplicity pp and p-Pb collisions, provided new insights on the interplay among small and large collision systems. One of the possible scenarios proposed for describing these findings is the presence of multiple parton-parton interactions (MPIs) which affect both the soft component of the event, as well as the hard scales responsible for heavy-quark production at the LHC energies. In this contribution the measurement of the J/ψ flow coefficients in pp and Pb-Pb collisions at mid ($|y|$<0.8) and forward (2.5 < y < 4) rapidity carried out by the ALICE collaboration will be presented. In addition, thanks to the upgraded detector in Run 3 more precise measurements of the same quantities will be possible in pp and Pb-Pb collisions at $\sqrt{s}$ = 13.6 TeV and $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV respectively. The status of these ongoing measurements and available model predictions will be also discussed.

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Classification de Session: Posters

Classification de thématique: Bulk matter phenomena, QCD phase diagram and Critical point