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Measurement of hadronic resonances production in small systems with ALICE at LHC

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Hadronic resonances are effective tools for studying the hadronic phase in ultrarelativistic heavy-ion collisions. In fact, their lifetime is comparable to that of the hadronic phase, and resonances are sensitive to effects such as rescattering and regeneration processes, which might affect the resonance yields and shape of the transverse momentum spectra. These processes can be studied considering the yield ratio of resonance to the corresponding stable particle as a function of the charged-particle multiplicity. Similar characteristics to those in heavy-ion collisions have been observed in the multiplicity-dependent studies of particle production in pp and p-Pb collisions. Resonance measurements may provide insight into the potential emergence of collective-like phenomena and a non-zero lifetime of the hadronic phase in small collision systems.

In this contribution, we present new ALICE results on the measurement of mesonic and baryonic resonances in small collision systems at LHC energies, including the measurement of $K^{*\pm}$ (892), Λ (1520), $\Sigma^{*\pm}$ (1385), Ξ^0 (1530), ϕ (1020) as a function of the charged-particle multiplicity.

Session

Heavy Ions and QCD

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