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Hadronic resonance production in small collision systems with ALICE at the LHC

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Short-lived hadronic resonances are good probes to investigate the late-stage evolution of ultra-relativistic heavy ion collisions. Since they have lifetimes comparable to that of the system created after the collision, the measured yields may be affected by the competing rescattering and regeneration processes during the hadronic phase, which modify the particle's momentum distributions after hadronization. Measurements of the production of resonances characterized by different lifetimes, masses, quark content, and quantum numbers can be used to explore the different mechanisms that influence the shape of particle momentum spectra, the dynamical evolution and lifetime of the hadronic phase, strangeness production, and collective effects. Furthermore multiplicity dependent analyses of resonance production in pp and p–Pb collisions could highlight the possible onset of collective-like phenomena even in small systems. The ALICE experiment has collected data from several collision systems at LHC energies and the latest results on hadronic resonance production, like $\rho(770)^0$, $K^*(892)^{\pm}$, $\Sigma(1385)^{\pm}$, $\Xi(1530)^0$, and $\Phi(1020)$ in pp and p–Pb collisions will be presented here.

In-person participation

No

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