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Latest results on hadronic resonance production with ALICE at the LHC

Hadronic resonances, due to their short lifetimes, are useful to probe the properties of the hadronic phase in ultra-relativistic heavy-ion collisions. Indeed, regeneration and rescattering processes occurring in the hadron gas modify the measured yields of hadronic resonances and can be studied by measuring resonance yields as a function of system size and by comparing to model predictions with and without hadronic interactions. In addition, having different masses, quantum numbers, and quark content, they carry a wealth of information about the processes which determine the shapes of particle momentum spectra, strangeness production, parton energy loss and the possible onset of collective effects in small systems.
With its excellent tracking and particle identification capabilities, the ALICE experiment at the LHC has measured a comprehensive set of both meson and baryon resonances. We present recent results on resonance production in pp, p–Pb, Xe–Xe and Pb–Pb collisions at various centre-of-mass energies, highlighting new results on $K^*(892)\pm$, $\Sigma(1385)$ and $\Lambda(1520)$. The obtained results are used to study the system-size and collision-energy evolution of transverse momentum spectra, yields, mean transverse momentum, yield ratios to stable hadrons, and nuclear modification factors. These results are compared to lower energy measurements and model calculations if available.

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