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Latest results on hadronic resonance production with ALICE at the LHC

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Hadronic resonances, due to their short lifetimes, are good probes to investigate the late-stage evolution of ultra-relativistic heavy ion collisions. Since they have lifetimes comparable to that of the fireball, the measured yields may be affected by rescattering and regeneration processes in the hadronic phase, which also modifies 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. Moreover, recent multiplicity-dependent studies of particle production in pp and pPb collisions have shown similar features as in heavy-ion collisions. Measurements using resonances could help to understand the possible onset of collective-like phenomena and a non-zero lifetime of the hadronic phase in a small collision system.

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. Recent results on resonance production in pp, pPb, XeXe and PbPb collisions at various center-of-mass energies, highlighting new results on $K^*(892)^\pm$, $\Sigma(1385)$ and $\Lambda(1520)$, will be presented.

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