

## Probing the hadronic phase with resonances of different lifetimes in ALICE at the LHC

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The ALICE experiment has measured the production of a rich set of hadronic resonances, such as  $\rho^0(770)$ ,  $K^*(892)$ ,  $\phi(1020)$ ,  $\Sigma^\pm(1385)$ ,  $\Lambda(1520)$  and  $\Xi^0(1530)$ , in pp, p-Pb and Pb-Pb collisions at various energies at the LHC. A comprehensive overview and the latest results will be presented in this talk. Transverse momentum spectra, mean transverse momenta and particle production ratios will be discussed as a function of multiplicity/centrality and collision energy. Results are compared to Monte Carlo event generators, including EPOS3 with UrQMD afterburner, and predictions from statistical hadronisation models. Special focus will be given to the role of hadronic resonances for the study of final-state effects in high-energy collisions. In particular, the measurement of resonance production in heavy-ion collisions has the capability to provide insight into the existence of a prolonged hadronic phase after hadronisation. If such hadronic phase lasts long enough, the decay daughters of very shortlived resonances experience its full evolution and suffer re-scattering in the dense hadronic medium, which could modify their correlations and hence the experimentally measured resonance yields. The observation of the suppression of the production of  $\Lambda(1520)$  resonances in central Pb-Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV adds further support to the existence of such a dense hadronic phase, as already evidenced by  $K^*/K$  and  $\rho/\pi$  measurements.

### List of tracks

Hadron resonances

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