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Hadronic resonance production measured by the ALICE experiment at LHC

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Hadronic resonances are among the most interesting probes of the hot and dense matter created in Pb–Pb collisions. Due to their short lifetime, they are sensitive to the anticipated chiral symmetry restoration as well as to suppression and regeneration due to hadronic interactions in the final state. At intermediate and high transverse momenta (p_T) resonances which cover the range of masses between the light pions and heavier protons contribute in systematic study of the baryon puzzle and parton energy loss in the dense medium. Measurements in pp collisions are used as a reference for heavier collision systems and contribute to precision tests of the pQCD and of the currently available parameterizations of fragmentation functions. Studies in p–Pb collisions are important for the interpretation of heavy ion results as they allow to decouple and understand the cold nuclear matter effects from final state effects.

The ALICE collaboration has performed systematic study of the $K(892)^0$ and $\phi(1020)$ mesons production at mid-rapidity in pp, p–Pb and Pb–Pb collisions at LHC energies. In this presentation recent results of these studies including p_T spectra, particle ratios, nuclear modification factors in p–Pb and Pb–Pb collisions are presented and compared to available model predictions.

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