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Probing the hadronic phase of large hadronizing system through the study of the Λ(1520) resonance with ALICE at the LHC

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The measurement of hadronic resonance production in heavy-ion collisions at the LHC has led to the observation of a prolonged hadronic phase after hadronisation. Due to their short lifetime, resonances experience the competing effects of regeneration and rescattering of the decay products in the hadronic medium. Studying how the experimentally measured yields are affected by these effects can extend the current understanding of the properties of the hadronic phase and the mechanism that determines the shape of particle transverse momentum spectra.

New preliminary results are presented on the production of the $\Lambda(1520)$ resonance measured in Pb-Pb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV with the ALICE detector at the LHC. These results are compared with the set of hadronic resonances with a lifetime span of 1 to 46 fm/c such as $\rho(770)^0$, $^*(892)^0$, $\Sigma(1385)^{\pm}$, $\Xi(1530)^0$ and $\phi(1020)$ measured by the ALICE experiment. The spectral shapes, mean-p_{T} and particle ratios are compared with Fast Reso Blast-Wave model, MUSIC with SMASH afterburner and statistical hadronisation model predictions.

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