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Exotic bound state measurements with ALICE at the LHC

Nuclear collisions at LHC energies are a unique opportunity to study hadronization mechanisms and the formation of exotic states. The ALICE experiment has excellent capabilities of identifying hadrons in a wide momentum range. This represents a great advantage in searches for exotic QCD bound states originated from a medium of deconfined QCD matter. The data collected so far allow to search new states in several collision systems and energies, thus providing a closer look to hadronization mechanisms and strong force interaction among baryons. In particular, the study of the properties of multi-baryon states containing hyperons gives information on the hyperon-nucleon interactions that is complementary to correlation measurements.

Furthermore, the future upgrade of the ALICE experiment, namely ALICE 3, will enlarge the physics reach of exotica measurements, allowing for the detection of exotic hadrons containing charm and beauty quarks.

In this contribution, a review of the experimental results of exotic bound states and hyperon-baryon correlation as measured in ALICE will be presented, and the perspectives for new measurements after the upgrade of the experiment will be provided.

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