

Exotic Hadron Detection with Alice at the LHC

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Heavy ion collisions at LHC energies offer a unique opportunity to study the formation of complex QCD bound states such as pentaquarks, tetraquarks, hadron molecules or multi-baryon states. Thermal and coalescence models are able to describe light nuclei and hypernuclei production in ultrarelativistic heavy ion collisions. Such theoretical scenarios can also be used to predict the production yield of more exotic bound states at the same energies. The ALICE experiment has a unique capability to identify hadrons in a wide momentum range allowing for interesting measurements also in the exotic sector. In the first data taking periods already several interesting results on hypernuclei and light nuclei production have been obtained and among them a crucial one is the hypertriton lifetime measurement. Result on the measured hypertriton lifetime and future improvements will be discussed. The future upgrade of the ALICE experiment and the upgrade of the LHC luminosity will provide larger data samples and a better precision in rare signal detection. Latest results on (hyper)nuclei and strange dibaryons measurements with ALICE will be shown and the prospects for searches for exotic states after the LHC luminosity upgrade will also be discussed.

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