The 8th Asian Triangle Heavy-Ion Conference (ATHIC2021)



Contribution ID: 20

Type: not specified

Hadronic resonance production in small colliding systems with ALICE at the LHC

Sunday, 7 November 2021 17:25 (17 minutes)

Hadronic resonances are very useful to probe the late-stage evolution of ultra-relativistic nucleon-nucleon or nuclear collisions. Since they have lifetimes comparable to the hadronic phase timespan, rescattering and regeneration processes may affect the measured yields. These processes modify the resonance momentum distributions. Measurements of the differential yields of resonances with different lifetime, mass, quark content, and quantum numbers will enable understanding the mechanisms that influence the shape of particle momentum spectra, lifetime of the hadronic phase, strangeness production, parton energy loss, and collective effects. Recent multiplicity-dependent studies on particle production in pp and p–Pb collisions have shown similar features as in heavy-ion collisions. Resonance measurements could help to understand the possible onset of collective-like phenomena and a non-zero lifetime of the hadronic phase even in a small system. Furthermore, the measurements in small systems are used as a reference for heavy-ion collisions and help tune Quantum Chromodynamics (QCD) inspired event generators.

This talk presents recent ALICE results on various hadronic resonances in small collision systems at LHC energies. The results will be compared with model calculations and measurements at low energies

Primary author: MALLICK, Dukhishyam (National Institute of Science Education and Research (IN))Presenter: MALLICK, Dukhishyam (National Institute of Science Education and Research (IN))Session Classification: Contributed session 4

Track Classification: Track group 2: Experiment