

Probing heavy-ion collisions at LHC energies with quarkonia

Dr. Markus Köhler

Physikalisches Institut, Universität Heidelberg

The unprecedented collision energies at LHC allow for a detailed investigation of quarkonium states, which are an excellent probe for the properties of the hot and dense medium created in heavy-ion collisions. The production and eventual hadronisation of heavy quarks are well separated in the space-time evolution of a collision and provide a wealth of information of the underlying dynamics from the dense to the dilute system.

In this presentation, recent results on quarkonium production in pp, p-Pb and Pb-Pb collisions measured by the ALICE detector at mid- and forward rapidity are presented, where the emphasis is placed on J/ψ production in Pb-Pb collisions. Experimental results are compared with available phenomenological models.

An outlook for potential quarkonium measurements in future data takings is shown.