

STUDY OF SPECTATORS WITH FHCAL IN THE MPD/NICA EXPERIMENT

The forward hadron calorimeters (FHCAL) in the ongoing MPD/NICA (JINR, Dubna, Russia) [1] experiment will be used to measure the centrality, orientation of the event plane, and to study the properties of spectators. The possibility of studying spectators in heavy-ions collisions with FHCAL is provided by the fine segmentation of the calorimeter, which consists of 44 lead/scintillator modules. The properties of spectator matter as a dependence on centrality in Monte-Carlo simulations have been studied in this work. Several observables that describe the spatial-energy distribution of spectators in FHCAL modules are presented. The observables were obtained by a two-dimensional fit of energy deposition in the modules of the calorimeter. The report shows how the distributions of the observables depend on the collisions impact parameters.

1. MPD Collaboration. V. Abgaryan et al. e-Print: 2202.08970 [physics.ins-det] (2022)

The speaker is a student or young scientist

Yes

Section

1. Intermediate and high energies, heavy ion collisions

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