The 5th international conference on particle physics and astrophysics



Contribution ID : 854

Type : Oral talk

Reconstruction of yy mass spectra in AgAg collisions at 1.23 and 1.58 AGeV beam energies with ECal detector of the HADES experiment

Tuesday, 6 October 2020 18:05 (15)

HADES is a large acceptance di-electron spectrometer operating at SIS18, GSI, Germany to study hadronproton, hadron-nucleus and nucleus-nucleus collisions at 1-2 AGeV beam energies. The new electromagnetic calorimeter (ECAL) was used for the first time at the HADES setup in 2019 for the study of Ag+Ag reaction at 1.23 AGeV and 1.58 AGeV beam energies. The talk is devoted to methods of the π 0 mass spectra reconstruction from these data. The analysis includes several steps: 1) calibration of each module of the ECal detector, 2) identification of γ -quants, 3) reconstruction of γ - γ invariant mass spectra, 4) subtraction of combinatorial background and 5) efficiency correction. The obtained results show experimental capabilities of the new detector and allow to normalize yields of other particles.

Primary author(s): SHABANOV, ArseniyPresenter(s): SHABANOV, ArseniySession Classification: Heavy Ion Physics

Track Classification : Heavy Ion physics