

Measurement of neutral pion production in Ag+Ag collisions at 1.23 AGeV beam energy at the HADES experiment

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The High Acceptance DiElectron Spectrometer (HADES) is a fixed target experiment which explores the properties of hadronic matter in collisions of pions, protons and ions with various nuclei at beam energies 1-2 A GeV. It operates at the SIS18 accelerator in GSI, Darmstadt. Due to the newly built electromagnetic calorimeter ECal the HADES has a possibility to measure yield of the neutral pions via $\pi^0 \rightarrow \gamma\gamma$ decay. These measurements play an important role in reducing the systematic uncertainties in study of dilepton spectra.

The analyzed data were collected in Ag + Ag collisions at the beam energy 1.23 A GeV. The events with centrality 0-30 % were chosen for the analysis. The procedure of measurement of π^0 yield and its uncertainty are discussed in this talk. The calibration of the ECal detector, acceptance and efficiency corrections and extrapolation of the p_t and y spectra will be discussed.

The speaker is a student or young scientist

Yes

Section

1. Intermediate and high energies, heavy ion collisions

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