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Reconstruction of π^0 and eta mesons via external conversion in Au+Au at 1.23 AGeV with HADES

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Lepton pairs emerging from decays of virtual photons are considered to be the most promising probes of dense hadronic matter. The HADES experiment at GSI studies dielectron radiation as well as strangeness production in various proton, deuteron and heavy-ion induced reactions. The understanding of the corresponding experimental results calls for supporting studies from transport calculations. For a more model independent understanding of the dilepton pair cocktail the production cross sections of particles created during the freeze out is crucial. In this contribution we will present results from a 4-lepton analysis of Au+Au in 1.23 AGeV collisions providing information on π^0 and eta mesons. Therefore the ability of HADES to detect dilepton pairs from external conversion of real photons has been studied in details. To gain further insight we will compare a clean sample of simulated mesons created with the PLUTO event generator to UrQMD cocktail simulations as well as real measured lepton double pair distributions.

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