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Reconstruction of π^0 and η mesons via conversion method in Au+Au at 1.23A GeV with HADES

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Lepton pairs emerging from decays of virtual photons represent promising probes of matter under extreme conditions. In the energy domain of 1 - 2 GeV per nucleon, the HADES experiment at GSI Helmholtzzentrum fuer Schwerionenforschung in Darmstadt studies di-electrons and strangeness production in various reactions, i.e. collisions of pions, protons, deuterons and heavy-ions with nuclei. An accurate determination of the medium radiation depends on a precise knowledge of the underlying hadronic cocktail composed of various sources contributing to the net spectra. Therefore, a measurement of the neutral meson yields together with the dileptons is crucial. In this contribution, the capability of HADES to detect e^-e^+ pairs from conversions of real photons will be demonstrated. We will present results from a two-photon analysis of Au+Au collisions

at 1.23 GeV/u providing information on neutral π^0 and η mesons. Supported by BMBF (06FY9100I and 06FY7114), HIC for FAIR, EMMI, GSI, HGS-Hire and H-QM

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