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Neutral mesons flow and yields in AgAg@1.58 AGev at HADES

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The Dielectron Spectrometer HADES operated at the SIS18 synchrotron, GSI Darmstadt recently provided new intriguing results on production of electron pairs and of strangeness from nucleus-nucleus collisions, as well as from elementary reactions, in energy region of 1–2~A~GeV. In 2019 the spectrometer was complemented by an electromagnetic calorimeter based on lead-glass modules, which allows us to measure photons, thus study production of the π0 and η mesons via their two-photon decay. The knowledge of the neutral meson production is a mandatory prerequisite for the interpretation of dielectron data and at the same time almost no respective data about their production in nucleus-nucleus collisions are presently available for this energy range.\par Particularly, directed and elliptic flow of neutral mesons will be shown with respect to transverse momentum and rapidity for different centrality classes in Ag + Ag collisions at 1.58~A~GeV. Results of analysis corresponding to 14×109 events will be confronted with results of other experiments and with up-to-date model calculations.

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