

Abstract Submitted
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Charm study via electron-hadron azimuthal correlations in p+p and d+Au $\sqrt{s_{NN}} = 200$ GeV collisions SOTIRIA BATSOULI, OakRidge Labs, PHENIX COLLABORATION — PHENIX data on single electron production indicate an excess of electrons over known light hadronic sources that has been attributed to open charm and beauty decays. The non-photonic electron yields are consistent with two different scenarios. One is the creation of a medium completely transparent to heavy quarks. The other is the creation of a highly opaque medium with the heavy quarks rescattering and hadronizing in the system. We can distinguish between these different scenarios by studying the electron-charged hadron azimuthal correlations with respect to the system size. The correlations in p+p and d+Au collisions provide a direct observation of the heavy quark jets and the baseline for possible shape modifications in the Au+Au central collisions. The method for extracting the non-photonic azimuthal correlations and the current results for p+p, d+Au at $\sqrt{s_{NN}} = 200$ GeV PHENIX data will be presented.

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