

Abstract Submitted
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Scaling properties of Elliptic Flow at RHIC energies¹ ARKADIJ TARANENKO, Department of Chemistry, SUNY Stony Brook, PHENIX COLLABORATION — Elliptic flow is one of the most sensitive probes to study the dynamical evolution and properties of the hot and dense medium created in ultra-relativistic heavy ion collisions at RHIC. One of the most important observations is the very good description of these measurements, up to $p_T = 1.5$ GeV/c, by perfect fluid hydrodynamics, which predicts several scaling relations between elliptic flow and eccentricity, colliding system size, and transverse kinetic energy for different particle species. Testing these scaling predictions give the possibility to understand better the properties of the matter produced in heavy-ion collisions at RHIC. Detailed analysis of the scaling properties of the fine structure of elliptic flow at RHIC (i.e dependence on transverse momentum, particle type, centrality, system size, colliding energy...) will be presented and discussed.

¹for the PHENIX collaboration

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