

Mean field effects on elliptic flows in relativistic heavy ion collisions

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Within the framework of a multiphase transport (AMPT) model that includes both initial partonic and final hadronic interactions, we show that including mean-field potentials in the hadronic phase leads to a splitting of the elliptic flows of particles and their antiparticles, providing thus a plausible explanation of the different elliptic flows between p and \bar{p} , K^+ and K^- , and π^+ and π^- observed in recent Beam Energy Scan (BES) program at the Relativistic Heavy-Ion Collider (RHIC). Comments on the mean-field effects in the partonic phase will also be presented.

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