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Elliptic flow of light nuclei in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV

Content :

Coalescence is a mechanism for partons to form hadrons in heavy ion collision. It is experimentally difficult to study how local correlations and energy/entropy play a role in coalescence since the partonic constituents are not directly observable. In relativistic heavy ion collisions, light nuclei and anti-nuclei are formed through coalescence of nucleons and anti-nucleons. The probability of this final-state coalescence is related to the local nucleon density. Various properties of the nuclei and it's constituent nucleons are experimentally measurable and thereby providing information to understand the coalescence process. We will present the STAR results on elliptic flow, v_{2}, of light nuclei (d and ^{3}He) at mid-rapidity in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV. These results will be compared to v_{2} of protons. We will also compare the measured nuclei v_{2} to results from a dynamical coalescence model calculation.

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