

Study of kinematic dependence of azimuthal anisotropies in small collision systems at PHENIX

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There have been extensive studies to measure long-range correlations among produced particles from small collision systems, and the experimental results clearly indicate collective flow phenomena in these systems. Previously, PHENIX published elliptic and triangular flow results in high multiplicity $p+Au$, $d+Au$, and $^3\text{He}+Au$ collisions. The results can be described by hydrodynamics translating initial geometry to final momentum anisotropy. More detailed studies have been performed using the two-particle correlation method, and the new analysis shows consistent elliptic and triangular flow results with the previous results. Another analysis has been done with various detector combinations to understand non-flow effects and longitudinal decorrelations can affect flow measurements. In this presentation, new PHENIX results of long-range particle correlations in $p/d/{}^3\text{He}+Au$ and $p+p$ collisions at $\sqrt{s_{NN}} = 200$ GeV will be presented.

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