

Measurement of higher-order cumulants of net-(kaon+Lambda) multiplicity distributions in $\sqrt{s_{NN}} = 27$ GeV Au+Au collisions with STAR

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The main goal of the RHIC Beam Energy Scan program is to explore the QCD phase diagram and search for the location of the QCD critical point. The cumulants of net-charge, net-proton, and net-kaon multiplicity distributions are related to the susceptibilities of conserved quantities, such as net-charge, net-baryon, and net-strangeness, respectively. However, the cumulants of net-(kaon+Lambda) multiplicity distributions are sensitive to net-strangeness susceptibility in heavy-ion collisions. Hence it can provide an insight to study flavor-dependent chemical freeze-out parameters in heavy-ion collisions. We report the higher-order diagonal cumulants (1st up to 4th order) and their ratios in Au+Au collisions at $\sqrt{s_{NN}} = 27$ GeV using the data taken in the year 2018. The cumulants of Lambda, kaon and their anti-particles are measured with transverse momentum between 0.4 and 1.6 GeV/ c , and rapidity $|y| < 0.5$. These results are compared with HRG and UrQMD models.