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## Exploring the QCD phase diagram with collective flow at STAR

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Directed and elliptic flow ( $v_1$ ,  $v_2$ ) are sensitive to the dynamics of heavy-ion collisions and the equation of state (EoS) of the medium. The  $v_1$  slope with rapidity ( $dv_1/dy$ ) at mid-rapidity of net-baryons is expected to be sensitive to the first-order phase transition. Studying the flow harmonics for various identified particles at different collision energies provides insights into the medium going through QCD phase transition. In particular, (multi-) strange hadrons with small hadronic cross-sections are cleaner probes of the early stages of heavy-ion collisions. A comprehensive study of light and (multi-) strange hadrons provides valuable insights into the subsequent stages of the medium evolution.

In this talk, the measurements of  $v_1$  and  $v_2$  for both light and (multi-) strange hadrons at  $\sqrt{s_{NN}} = 3.0 - 19.6$  GeV, with the enhanced capabilities of the STAR detector and increased statistics from the second phase of the RHIC beam energy scan (BES-II) program, will be presented. The centrality dependence of anisotropic flow and the test of number of constituent quark (NCQ) scaling will be shown. Also, the energy and centrality dependence of  $v_1$  slope and  $p_T$ -integrated  $v_2$  will be presented. The data will be compared with different model calculations, and the inferences on the QCD phase structure and EoS of nuclear matter in the high baryon density region will be discussed.

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