Identified particle v_1 and v_2 in $\sqrt{s_{NN}} = 3$ GeV Au+Au collisions at STAR

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Directed flow (v_1) and elliptic flow (v_2) are important observables in the relativistic heavy-ion collisions, as they are established during the early stage of the system evolution, which can allow us to access the collective properties of the expanding system. This is an important part of our program for studying the QCD phase structure at RHIC.

In this talk, we will present the centrality dependence of identified particle ($\pi^{\pm}$, $K^{\pm}$, p) v_1 and v_2 in Au+Au collisions at $\sqrt{s_{NN}} = 3$ GeV with the fixed-target mode (beam energy of 3.85 GeV/u) at STAR. The transverse momentum (p_T) and rapidity (y) dependence of identified particle v_1 and v_2 will be discussed. We will also discuss the number of constituent quark (NCQ) scaling in v_2 and energy dependence of v_1 and v_2, these results will be compared to that from STAR BES-I data. In addition, model calculations of v_1 and v_2 for those identified hadrons will also be discussed.