

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

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

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