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# The elliptic flow of Multi-strange hadrons in $\sqrt{s_{NN}} = 200$ GeV Au + Au collisions at STAR

## Content :

The measurement of event anisotropy,  $v_2$ , provides a powerful tool for studying the properties of hot and dense medium created in high-energy nuclear collisions. The important discoveries of partonic collectivity and the process for hadronization - quark coalescence were obtained through a systematic analysis of the  $v_2$  for 200 GeV Au+Au collisions at RHIC [1]. However, early dynamic information might be masked by later hadronic rescatterings. Multi-strange hadrons ( $\phi$ ,  $\Xi$  and  $\Omega$ ) with their large mass and presumably small hadronic cross sections should be less sensitive to hadronic rescattering in the later stage of the collisions and therefore a good probe of the early stage of the collision.

We will present the measurement of Multi-strange hadron elliptic flow in Au + Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. The number of quark scaling for multi-strange hadron  $v_2$  at intermediate pT is observed for  $\phi$  and  $\Omega$ . We will also discuss about the possible breaking of mass ordering of phi meson at low pT. The results from hybrid model approaches (ideal-hydro + hadronic-transport) will be compared with the data .

[1] B. I. Abelev et al., (STAR Collaboration), Phys. Rev. **C 77**, 054901 (2008).

## Collaboration :

the STAR collaboration

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