

QPT 2019

Enshi, China

Contribution ID: 41

Type: not specified

## Hadrons productions in Cu+Au collisions at $\sqrt{s_{NN}} = 200\text{GeV}$ with AMPT model

### Summary

A multi-phase transport (AMPT) model is used to study the hadrons productions in Cu+Au collisions at  $\sqrt{s_{NN}} = 200\text{GeV}$ . The yields  $dN/dy$  of identified hadrons are calculated and show that the distributions have asymmetric dependence on rapidity. The transverse momentum  $p_T$  spectra at mid-rapidity are also predicted. For elliptic flows at mid-rapidity as functions as  $p_T$ , the descriptions with AMPT model for pion, kaon, proton have agreements with the experimental data from PHENIX up to  $p_T \sim 1\text{ GeV}$ , as well as for the triangular flows. Additionally, we investigate the forward/backward asymmetry of  $v_2$  and  $v_3$ , and find that the anisotropy flows on the Au-going side are larger than that on the Cu-going side. The asymmetry tends to go away in the enough peripheral collisions.

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