

Identified particle spectra in isobaric collisions of Ru+Ru and Zr+Zr at $\sqrt{s_{\text{NN}}} = 200$ GeV with the STAR experiment

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1 Transverse momentum distributions of identified hadrons provide impor-
2 tant information on the transverse expansion and freeze-out properties of the
3 hot and dense matter created in relativistic heavy-ion collisions. In 2018, the
4 STAR experiment collected large datasets of isobaric collisions of $^{96}_{44}\text{Ru}+^{96}_{44}\text{Ru}$
5 and $^{96}_{40}\text{Zr}+^{96}_{40}\text{Zr}$ at $\sqrt{s_{\text{NN}}} = 200$ GeV, which provide a good opportunity to
6 study the charged particle spectra in these collisions with great precision.

7 In this presentation, we will report analysis progresses towards measuring
8 π^\pm, K^\pm , proton and antiproton spectra as a function of transverse momentum
9 for different rapidity and centrality intervals. Bulk properties of the system
10 at chemical and kinetic freeze-out are measured. The results bridge the gap
11 in system size between Cu+Cu and Au+Au collisions. Physics implications
12 of these measurements will be discussed.