

# Net-proton and net-charge number fluctuations in $^{96}\text{Ru}+^{96}\text{Ru}$ and $^{96}\text{Zr}+^{96}\text{Zr}$ collisions at $\sqrt{s_{\text{NN}}} = 200$ GeV from STAR

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1 Conserved charge fluctuations are sensitive probes to the thermodynamic  
2 properties of medium created in heavy-ion collisions and have been studied ex-  
3 tensively both experimentally and theoretically. In 2018, the STAR experi-  
4 ment collected large datasets of  $^{96}\text{Ru}+^{96}\text{Ru}$  and  $^{96}\text{Zr}+^{96}\text{Zr}$  collisions at  $\sqrt{s_{\text{NN}}}$   
5 = 200 GeV, which provide an opportunity to study the cumulants of con-  
6 served charges and their ratios with good precision in the isobaric systems.  
7 In this poster, we present the measurements of cumulants of the net-proton  
8 and net-charge multiplicity distributions up to fourth-order in  $^{96}\text{Ru}+^{96}\text{Ru}$  and  
9  $^{96}\text{Zr}+^{96}\text{Zr}$  collisions, as well as the cumulant ratios in the two colliding systems.

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