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# Study of $\bar{K}N$ interaction from the hadron-hadron correlation in high-energy nuclear collisions

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We discuss the $\bar{K}N$ correlation in high-energy nuclear collisions and its relation to the $\bar{K}N$ interaction. Given the source function, the hadron-hadron correlation can be useful to investigate the interaction. Recently, it has been shown by the ALICE collaboration that the effect of the threshold difference due to the isospin symmetry breaking is important for more detailed determination of the $\bar{K}N$ interaction. In this study, we construct the method to calculate the correlation including all the effects of coupled-channel, Coulomb force and the threshold difference. With the results of the $K^-p$ correlation calculated using the local potential constructed based on chiral dynamics, we show the significance of taking these effects into account and we discuss the low energy region of $\bar{K}N$ interaction.

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