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Femtосcopy studies of meson-baryon and baryon-baryon pairs with strangeness

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The two-particle momentum correlation function from high-energy nuclear collisions is beginning to be used to study hadron-hadron interaction. Because this observable is sensitive to the low-energy interaction, it is useful to study the nature of the near-threshold resonances and the underlying mechanism of the interaction. The meson-baryon and baryon-baryon interaction in strangeness sector is the good target of this approach. In this talk, we first discuss the theoretical and experimental situation of the K^-p correlation function. We see that the coupled-channel source effect gives the important enhancement and the source size dependence of the correlation function is key to investigate the interaction detail from the correlation data. Next, we discuss the correlation function using the α particle. Because α is the composite particle whose central nuclear density reaches 2 normal nuclear density, it is expected that the correlation function shows the density effect of the interaction. I show the results with the $\Lambda\alpha$ correlation and $\Xi\alpha$ correlation using the effective models and discuss how the detailed ΛN and ΞN interaction can be determined from the measurement.

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