

Precise tests of the strong interaction among hadrons via femtoscopy

The description and quantitative understanding of the strong interaction between hadrons is one of the most fundamental problems in nuclear physics and it is crucial to describe the evolution and the properties of matter under extreme conditions.

Results from high energy nucleus-nucleus collision experiments using two-particle correlations in the momentum space will be presented. Such a method, called femtoscopy, enables a direct insight into short-range hadron-hadron strong interactions, delivering measurements with unprecedented precision also in the strangeness sector.

The femtoscopy method is being extended to study the charm sector and to three hadron systems, with potential sensitivity to the three-body dynamics and forces.

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