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Can we measure genuine three body interactions with femtoscopy?

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Genuine three-body forces in nuclear physics absorb all the effects which can not be described by two-body interactions in three-, four-.. body systems and are necessary ingredients in the description of nuclear binding energies. For hyperons and nucleons such forces have never been measured directly since scattering experiments are difficult with unstable hyperons and since the data-base of hyper nuclei is still limited in comparison to the precision achieved for nuclei. In this talk we will discuss the possibility of measuring three-body interactions for hyperons and nucleons exploiting the femtoscopy method at the LHC. The experimental methodology and the recent results by phenomenological calculations will clarify to which extend the still unknown hyperon-nucleon-nucleon interactions can be measured in the next years.

session

G. Heavy Ion Physics

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