

Current knowledge and future prospect on double hypernuclei

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We have been promoting experiments to search for double hypernuclei using nuclear emulsion at KEK and J-PARC. Although not many samples have been interpreted in a unique way, they provide a glimpse of characteristics on two Lambda binding energies (B_{LL}) in the nucleus and the internal structure of the Xi hypernucleus. In this talk, we will focus on the atomic mass-number dependence of B_{LL} and the ground and excited states of $^{15}\text{C-Xi}$ hypernuclei. We will also discuss the exploration method that can be expected to yield a further tenfold increase in statistics over the next few years.

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