

[KEYNOTE] A consideration on \bar{K} N and \bar{K} NN quasi-bound states found in the kaon-induced reactions on deuteron and helium-3

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Recently, experimental studies of the kaon-induced reactions on deuteron and helium-3 were carried out at J-PARC. The former experiment reported a resonance pole below the \bar{K} N mass threshold in the deduced S-wave \bar{K} N scattering amplitude in the isospin = 0 channel [1]. The pole is naturally interpreted as a \bar{K} N bound state. The latter experiment reported a bump structure below the \bar{K} NN mass threshold in the Λ -p invariant mass spectrum, which is naturally interpreted as a \bar{K} NN bound state [2,3]. Based on the measured spectral shapes, a relation between the two observed states will be considered in terms of the \bar{K} N and \bar{K} NN interaction potentials in this presentation.

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