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The Impurity Effects in sd -Shell Λ Hypernuclei MASAHIRO ISAKA¹, MASAAKI KIMURA, Hokkaido University, AKINOBU DOTE, KEK, AKIRA OHNISHI, YITP — In this talk we will report the impurity effects in sd -shell Λ hypernuclei based on the theoretical model of Antisymmetrized Molecular Dynamics (AMD). One of the unique aspects of hypernuclei is the structure change caused by hyperon as an impurity. In particular, we can expect the drastic structure change in sd -shell Λ hypernuclei, since several sd -shell nuclei have the coexistence of various structures within very small excitation energy. To study such impurity effects in detail, we have extended AMD for hypernuclei. Since this extended AMD does not make any assumption on cluster structure, it makes possible to investigate the difference of the impurity effect for the shell and cluster structure. We have studied the structure change of sd -shell hypernuclei by this model using YNG interaction. For example, in the case of ${}_{\Lambda}^{20}\text{Ne}$, we have found that the addition of Λ has opposite effect to the preceding study. Such calculation has been performed for C, F, Ne hypernuclei and we will discuss the structure change and its dependence on the core state and the Λ particle orbital.

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