

TO PROBE THE ISOSPIN-DEPENDENCE OF THE EFFECTIVE NUCLEON-NUCLEON INTERACTION

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Abstract:

One of the most important features of nuclear physics, in general, is the nuclear symmetry energy that characterizes the variation of the binding energy as the neutron to proton ratio of a nuclear system is varied. The isospin-dependence of the effective nucleon-nucleon interaction was proved to play an important role in the study of the nuclear symmetry energy. This isospin-dependence can be probed by a microscopic study of charge-exchange reaction exciting to the isobaric analog state (CXIAS). Our up-to-date semi-microscopic model based on the folding calculation for the analysis of the CXIAS reaction is presented.