

Halo structure of ^{11}Be nucleus: A folding model description

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Abstract

Different versions of the double-folding optical model have been constructed to describe the the halo nucleus ^{11}Be elastic scattering. Successful predictions were obtained for $^{11}\text{Be}+^{12}\text{C}$ elastic scattering at 49.3 MeV/n using the generated potentials. The effect of the nuclear matter density of ^{11}Be was considered.