

## Nuclear Halo-Like Phenomena and Short-Range Nuclear Correlation

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**Abstract:** Based on Glauber Multiple Scattering Theory, high-energy proton elastic scattering on halo-like nucleus  $^{13}\text{C}$  is studied in a single nucleon wave function with low angular momentum configurations. A great agreement with experimental data is obtained and the theoretical prediction clearly shows that  $^{13}\text{C}$  has a neutron halo-like structure. Then, the origin and nature of nuclear halo phenomena are explained in terms of nuclear short-range correlations. Our conclusion shows that the origin of nuclear halo-like phenomena originates from short range nuclear correlation.

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Key words: halo-like nucleus, nuclear short-range correlation, nuclear structure

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