

عنوان مقاله:

Low-energy deuteron-deuteron elastic scattering in cluster effective field theory

محل انتشار:

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خلاصه مقاله:

We study the low-energy deuteron-deuteron elastic scattering using the cluster effective field theory formalism up to next-to-leading order (NLO). For this purpose, we initially focus on determination of the unknown effective field theory coupling constant values using the phase shift analysis and available differential cross section data. The differential cross section versus center of mass energy and scattering angle are plotted up to NLO in the suggested power counting and compared to the available experimental data. Our effective field theory results show good consistency with the present data.

کلمات کلیدی:

Few-body systems, Coulomb interaction, Cross section, phase shift

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