

Abstract Submitted
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Improved description of light nuclei through chiral effective field theory at leading order MARIO SÁNCHEZ SÁNCHEZ, Centre d'Études Nucléaires de Bordeaux-Gradignan — I present a rearrangement of the most commonly invoked version of the two-nucleon chiral potential so that the low-lying amplitude zero of the $1S_0$ partial wave is subsumed at first order in the effective expansion. Adopting other partial waves from the LENPIC interaction, I show through a no-core shell model calculation how such modification yields an improved description of ground-state energies and point-proton radii of three test nuclei, namely ^3H , ^4He and ^6He . I discuss possible implications of this proposal and point out some future research lines. This presentation is based upon the recent preprint <https://arxiv.org/abs/2002.12258>

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