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Renormalization and Power Counting of Chiral Nuclear Forces[1]
BINGWEI LONG, Jefferson Laboratory, CHIEH-JEN YANG, University of Arizona — We study renormalization of chiral nuclear forces by examining the cutoff dependence of the solution to the Lippmann-Schwinger equation for nucleon-nucleon scattering. In particular, we are interested in the interplay between renormalization and power counting of nucleon-nucleon contact interactions, leading to necessary modifications to Weinberg's original power counting scheme. We also discuss the difference between the conclusions of the previous investigations and ours.

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