Applications of SRG Factorization

E.R. ANDERSON, Ohio State Univ., S.K. BOGNER, Michigan State Univ., R.J. FURNSTAHL, K. HEBELER, H. HERGERT, R.J. PERRY, Ohio State Univ. — Recent calculations of nuclear structure make use of the similarity renormalization group to soften the nuclear potential through a series of unitary transformations, which suppress short range correlations.\textsuperscript{2,3} Not only does this lead to a decoupling of scales in the potential, but also simplifications for other operators. One consequence, in particular, is that operator expectation values of high-energy probes in low-energy nuclear states exhibit factorization. As a result, phenomena previously attributed to strong short-range correlations induced by the nucleon-nucleon interaction, such as nuclear scaling and the EMC effect, can now be understood more clearly as a result of low-momentum nuclear structure. Recent results are reported.

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