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High-momentum nucleons in low-momentum theories SCOTT BOGNER, Michigan State University

Ab-initio calculations of nuclei have seen explosive progress in recent years, thanks in part to simplifications that result from "low resolution" inter-nucleon interactions with minimal high-momentum components, such as those from chiral effective field theory. The low resolution picture is advantageous for structure calculations since wave functions are dominated by low momenta and are less correlated, calculations are more amenable to perturbative treatments, and mean-field approaches give a reasonable starting point. In recent years there has been impressive and rapid progress in probing the short distance/high-momentum structure of nuclei using hard electron scattering, where a high resolution picture appears to be more natural. An important question to ask is, how do we reconcile the low resolution picture that is so prevalent in microscopic nuclear structure calculations, with the high resolution picture utilized in short-range correlation studi es? To address this question, I use the simplest knock-out reaction, deuteron electrodisintegration, to illustrate how high-momentum operators (and physical interpretations!) evolve as the resolution is varied using the renormalization group.