

Abstract Submitted  
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**Local Projections of Low Momentum Potentials**<sup>1</sup> KYLE WENDT,  
The Ohio State University — Chiral and renormalized low resolution nucleon-nucleon interactions are inherently nonlocal. This nonlocality inhibits their use with some techniques for solving the quantum many-body problem including quantum monte carlo methods such as Green's Function Monte Carlo and Auxiliary Field Diffusion Monte Carlo. By exploiting simple integral projections, the non-local nuclear two body forces can be separated into a local interaction and non-local residual. This residual is demonstrated to be perturbative at low energy, raising the possibility of using non-local interactions with modern quantum monte carlo methods.

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