

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Updates on the Application of the Density Matrix Expansion to Nuclei ALEXANDER DYHDALO, Ohio State Univ - Columbus, SCOTT BOGNER, Michigan State University, RICHARD FURNSTAHL, Ohio State Univ - Columbus — The density matrix expansion (DME) is a method to produce purely local energy density functionals for finite-range potentials. We have applied a regulator-based coordinate-space approach to the DME for NN and 3N forces derived from chiral effective field theory both with and without Deltas, Phys. Rev. C 95, 054314 (2017). We also give updates on the status of the functional implementation of the derived density-dependent couplings, led by R. Navarro Perez and N. Schunck at LLNL, and discuss possible future directions.

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Date submitted: 30 Jun 2017

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