

Abstract Submitted
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Momentum-space Argonne V18 potential¹ SARAVANAN VEERASAMY, Ohio University, WAYNE POLYZOU, University of Iowa — We give two representations of the Argonne V18 potential in momentum space. The momentum-space potential is expressed as a linear combination of 24 spin-isospin operators with scalar coefficient functions of the momentum transfer. The coefficient functions are given by linear combinations of elementary functions or linear combinations of Chebyshev polynomials on a finite interval of momentum. Both provide practical and efficient representations for computing the momentum-space Argonne V18 potential that do not require integration or interpolation. Programs based on both expansions are publicly available.

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