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Realistic NN Interactions in Momentum Space - Visual Comparisons[1] A.G. NEGOITA, J.P. VARY, P. MARIS, Iowa State University, A. SHIROKOV, Moscow State University — It is challenging to gain physical intuition for non-local operators such as realistic NN interactions. In addition, whenever one truncates a local operator, such as approximating it in a finite matrix representation, one introduces non-locality. We portray contour plots in momentum space of the realistic NN interaction, JISP16 [1], as well as the identity operator and the kinetic energy operator truncated to a finite oscillator basis space. We present results as a function of the cutoff scale and compare with similar plots of the Chiral N3LO interaction [2] processed through the Similarity Renormalization Group (SRG) [3]. We visually search for well-matched features as a function of the renormalization scale as well as through the calculated nuclear properties resulting from these interactions [4]. A selection of these comparisons will be presented.

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