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Ab initio calculation of the optical model¹ HELBER DUSSAN, SETH WALDECKER, WILLEM DICKHOFF, HERBERT MÜTHER, ARTUR POLLS — We explore the effects of short-range correlations in nuclei for positive and negative energies starting from a microscopically generated irreducible self-energy. This approach is an attempt to develop an optical potential obtained from a realistic nucleon-nucleon interaction. In this first study we use a CD Bonn self-energy obtained for ^{40}Ca . Our results are compared with the ones found using the dispersive optical model (DOM) and with experimental data available for ^{40}Ca . Finally we outline further necessary developments to obtain a purely *ab initio* optical potential that can reproduce experimental data.

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