

# **Reinterpreting the Energy-Dependence of the Optical Potential.**

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In earlier works, we proposed a model for the nuclear potential of alpha-nucleus systems which is energy independent and has no adjustable parameters. This interaction has been successfully applied in the description of fusion, elastic and inelastic scattering data for many of those systems at the region of low energies. In the present work, we assume the same interaction as the bare potential to study the elastic scattering for  $4\text{He} + 208\text{Pb}$  in a wide energy range. We demonstrate that the corresponding data set can be described if couplings to inelastic states with high excitation energy are explicitly considered through coupled-channel calculations.

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