

DETAILED STUDY AND MEAN-FIELD INTERPRETATION OF $^{16}\text{O} + ^{12}\text{C}$ ELASTIC SCATTERING AT SEVEN MEDIUM ENERGIES

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Detailed measurements have been made of the elastic scattering of ^{16}O ions from ^{12}C at seven energies from 62 to 124 MeV, at center-of-mass angles from about 10° to about 145° . A coherent optical model analysis of these data has been made using both Woods–Saxon and folding-model potentials, and results found that are consistent with analyses of data at higher energies for this and similar light heavy-ion systems. Some model-independent spline forms for the real potentials were also investigated.

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