

ENERGY DEPENDENCE OF THE POTENTIAL FOR INTERACTION OF ^{16}O IONS WITH ^{12}C NUCLEI

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Experimental data of the $^{12}\text{C} + ^{16}\text{O}$ elastic scattering at the energies $E_{\text{c.m.}} = 8,6 - 135$ MeV were analyzed within optical model and coupled-reaction-channels method. The sets of parameters for the ($^{12}\text{C} + ^{16}\text{O}$)-potential of Woods - Saxon type with volume and surface absorption as well as their energy dependence were deduced. The contributions of simple transfers in the $^{12}\text{C} + ^{16}\text{O}$ elastic scattering were obtained.

Keywords: elastic heavy-ion scattering, transfer reactions, coupled-reaction-channels method, optical potentials.