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ENERGY DEPENDENCE OF THE $^{16}\text{O} + ^{12}\text{C}$ POTENTIAL OF INTERACTION

The $^{16}\text{O} + ^{12}\text{C}$ scattering data originating from various measurements in the energy range from 1 to 100 MeV/nucleon have been analyzed within optical model (OM). As a result the global energy dependent $^{16}\text{O} + ^{12}\text{C}$ - OM-potential has been obtained. Satisfactory description of experimental data is achieved. While analyzing differential cross sections of the elastic scattering and fusion cross sections were calculated using various types of optical potentials.

Keywords: heavy ions scattering, optical potentials, energy dependence of the potential parameters, optical model, folding model.