INVESTIGATION OF THE ENERGY DEPENDENCE OF THE RADIUS OF THE REAL PART OF THE OPTICAL POTENTIAL

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A new interpretation of the energy dependence of the radius of the optical potential is proposed. This method is based on an investigation of time delay of a particle scattering at its interaction with a nucleus of a target in case of the small quantities of partial dissipated waves and low ($E \leq 50$ MeV) energy for the spherical nuclei ^{208}Pb. Within the framework of the designed approach the analysis of the influence of a bound and virtual states of a nucleus on energy dependence to the radius of the optical potential is carried out.