POLARIZATION PHENOMENA IN THE ELASTIC SCATTERING OF PROTONS ON ^{4}He NUCLEI AND ENERGY DEPENDENCE OF p-α AMPLITUDE PARAMETERS

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The parameterization of the elastic scattering amplitude of protons on ^{4}He nuclei was proposed. Energy dependence of the parameters of this amplitude obtained from the comparison of the calculated and measured observable in the elastic p-^{4}He scattering was presented. On the basis of the multiple diffraction scattering theory and the α-cluster model with dispersion by using of this parameterization of p-α amplitude the observable in the proton elastic scattering on ^{16}O nuclei was calculated. The obtained results are in agreement with experimental data.