

HYPERSPHERICAL WAVEFUNCTION
AND ELASTIC DIFFRACTION SCATTERING
OF ${}^3\text{He}$ NUCLEI BY NUCLEI

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S u m m a r y

A hyperspherical ground-state wave function of a three-nucleon nucleus is proposed to analyze the data on diffraction interaction of ${}^3\text{He}$ -nuclei with medium and heavy nuclei. The results of calculations are compared to the cross sections obtained with the help of a simple wave function.

Methods to find these parameters are suggested directly from the optical potential and experimental data on angular distribution and polarization under elastic scattering and integral cross section. As an example, we consider $p - {}^{12}\text{C}$ elastic scattering at the energy of 150 MeV. Both methods are shown to lead to practically the same results. Our model functions can be used in studies of the inelastic processes involving polarized protons.