

*t*-MATRIX APPROXIMATION IN THE THEORY  
OF (p,2p) AND (p,np) REACTIONS

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S u m m a r y

Using the *t*-matrix approximation for distorted waves, new formulas for the amplitudes of the (p,2p) and (p,np) reactions are obtained. These formulas generalize the McCarthy expressions [8], derived for the symmetric coplanar geometry, to the case of an arbitrary geometry of the momenta of escaping nucleons. The derivation was carried out by the formal methods of the theory of nuclear reactions with account for the direct and indirect mechanisms. The results of calculations and their comparison with the experimental data on the  $^{12}\text{C}(p,2p)^{11}\text{B}$  reaction at an energy of 156 MeV in the non-coplanar geometry are presented. A good agreement between the theoretical and experimental data is obtained. It is shown that the exact expression obtained in this work for the reaction amplitude allows the derivation of all known approximations that are used for the description of these reactions.