

MECHANISM OF REACTION $B^{10}(t,p)B^{12}$ AT TRIZON ENERGIES
BELOW COULOMB BARRIER

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The reaction $B^{10}(t,p)B^{12}$ at tritons incident energies $E_t = 0,9$ MeV and $E_t = 1,1$ MeV below the Coulomb barrier ($V_c = 2$ MeV) was investigated. The aim was to indentify and estimate the contribution of four vertex mechanism of rection in which the virtual deuteron is created by two-step transfer process of triton neutrons. In the literature this type of process is Known at the energies above the Coulomb berner. The two-step process was analized in the PWBY approximation with Coulomb distortions included. The analysis of angular distributions of outgoing protons p_i ($i=1,2,...6$) shows that the experimental results are reproduced in general. Much better accordance with experimetas is obtained using the double Stripping process analysis in DWBA approximation with DWUCK Computer program. The experimental distributions are obtained in IBK-Vinča using the Cockroft Walton accelerator (1,5 MeV). The existence of minimum in all excited states at ($\theta_{cm}=40^{\circ}-100^{\circ}$) and the existence of resonance states in excitation function for proton groups P_1 , P_5 and P_6 lead to the conclusion that the compaund process is partially influent, while the important contributions of back scattering angles in distributions suggest the influence of the Coulomb scattering which is in dipendent of transfer angular momentum to torget nucleus.

In conclusion, the distributions below Coulomb barrier are due to the superposition of several mechanismus of reactions