

Abstract Submitted
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Analysis of ($^3\text{He},t$) charge exchange reaction¹ PARDEEP SINGH, NSCL, Michigan State Univ, E Lansing, USA and Deenbandhu Chhotu Ram University of Sc. and Tech. Murthal, Sonapat, India, R.G.T. ZEGERS, PAWEL DANIELEWICZ, SHUMPEI NOJI, NSCL, Michigan State Univ, E Lansing, USA — We have studied the ($^3\text{He},t$) charge-exchange reaction at 140 MeV/u on ^{12}C , ^{18}O , ^{26}Mg , $^{58,62,64}\text{Ni}$, ^{68}Zn and $^{118-120}\text{Sn}$ targets, within distorted wave impulse approximation. In contrast to most previous calculations, exchange contributions to the reaction are treated exactly. The present work focuses on Gamow-Teller and Fermi transitions, for which a proportionality between the differential cross section at zero momentum transfer and transitions strength is known to exist. The goal of the study is to investigate the quality of the new reaction calculations. If successful, it will allow for more detailed investigation of charge-exchange reactions data obtained with composite particles including for transitions with non-zero ΔL .

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