

# NEUTRINO-NUCLEON INTERACTION THROUGH INTERMEDIATE VECTOR BOSON

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A model was proposed to prospect the general features of the weak interaction of neutrino with nucleons. The interaction is viewed via intermediate vector boson. The deep inelastic differential cross section is calculated in terms of the leptonic and hadronic currents. The perturbation technique is used to evaluate the leptonic current that explains the cross section dependence on the four-vector momentum transfer square. On the other hand, the wave functions of the quarks forming the target nucleon are extracted by empirical method and used to evaluate the weak hadronic current. The hadronic current carries the lineaments of the reaction that depend on the Bjorken scaling variable. The prediction of the model can explain fairly the experimental data in the neutrino energy range 120-250 GeV and Bjorken variable  $x < 0.5$

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