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Towards a combined analysis of inclusive/exclusive electroproduction off protons

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Minkowski room (Physics building, 05-119)

Abstract

In recent years, major experimental advances have been achieved in the study of the nucleon resonance region of the electroproduction spectrum, both in inclusive and exclusive reactions. In this talk, I present our theoretical studies of the structure functions in view of the CLAS12 experiments planned in the near future, which are to cover an even broader Q^2 and energy range. First, we compute the resonant contributions to the proton structure functions using the electrocoupling data as input. Then, the combination of this resonance model with a non-resonant background based on Regge exchanges will enable, for the first time, a combined description of the low and high- x regions of inclusive observables. This is useful for tests on quark-hadron duality, as well as for the extraction of observables for which an integration over broad ranges of x is necessary.