BEHAVIOR OF FORMFACTORS OF NUCLEON RESONANCES AND QUARK-HADRON DUALITY

V. V. Davidovsky, B. V. Struminsky

Institute for Nuclear Research, Nat. Acad. Sci. of Ukraine (47, Nauky Prosp., Kyiv 03028, Ukraine; e-mail: odavi@kinr.kiev.ua)

Summary

Nucleon structure functions in the resonance region are investigated. Expressions for resonance production form-factors dependent on photon virtuality Q^2 , which have correct threshold behavior and take into account the available data on resonance decays, are obtained. The resonance part of nucleon structure functions is calculated. The manifestation of the quark-hadron duality in the behavior of the structure function F_2 is studied using the obtained expressions. The relation between the structure functions F_1 and F_2 in the resonance region is derived.