

Determination of the Axial-Vector from an Extended Linear Sigma Model

Authors : Tarek Sayed Taha Ali

Abstract : The dependence of the axial-vector coupling constant g_A on the quark masses has been investigated in the framework of the extended linear sigma model. The field equations have been solved in the mean-field approximation. Our study shows a better fitting to the experimental data compared with the existing models.

Keywords : extended linear sigma model, nucleon properties, axial coupling constant, physic

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