

Effective models of hadrons in Quantum Field Theory on the Light Front

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A possibility to obtain the spectrum of mesons (as quark-antiquark states) in effective model of Quantum Chromodynamics on the Light Front (LF) is considered. We use the effective Hamiltonian on the LF having the quark fields interacting with the zero modes of gluon fields. This effective Hamiltonian includes these terms in such a way that one can get quark-antiquark bound states. We chose these terms using arguments connected with the investigation of the limit transition to canonical formulation on the LF from the usual one, and also some semiphenomenological assumptions.

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