

J/ Ψ -meson photoproduction off the nucleon in a dynamical model

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Abstract The photoproduction of Φ and J/ψ meson off the nucleon is investigated within a dynamical model approach based on a Hamiltonian which describes the reaction mechanisms of the Pomeron exchange, meson exchange, and direct Φ - or J/ψ -radiation terms. The final state interaction is described by the gluon-exchange and direct Φ - or J/ψ -N coupling terms. The parameters of the Hamiltonian are determined by the latest experiments at the Jefferson Laboratory (JLab). We have found that the t-channel light mesons play a crucial role to describe the available JLab data in the low-energy region.

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