

DESCRIPTION OF HADRON INELASTIC
SCATTERING BY THE LAPLACE
METHOD AND NEW MECHANISMS
OF CROSS-SECTION GROWTH

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S u m m a r y

It is shown that there exist some types of Feynman diagrams, which can be calculated within the Laplace method. This allows one to reveal new mechanism of growth of the scattering cross-sections, which are not involved by the Regge theory due to the neglect of the dependence of the scattering amplitude on the longitudinal components of the momenta of secondary particles in the center-of-mass system of initial state particles. Within the multiperipheral model, the energy dependence of the total scattering cross-section is obtained. The theoretical results coincide qualitatively with experimental data.