where $\psi(\zeta) = \Gamma'(\zeta)/\Gamma(\zeta)$ denotes the logarithmic derivative of gamma-function [7] and $g = 8/(33 - 2n_f) = 0.32$ for four active flavours ($n_f = 4$) and $g = 0.296$ for $n_f = 3$. Result (14) is in a contradiction with the behaviour $f_{NS} \sim x^{-\gamma}$ with $\gamma = \sqrt{g \ln(y/b)/\ln(1/x)}$ predicted for the solution (11) (Altarelli-Parisi evolution). Formula (14) is in an agreement with the numerical calculation of $f_{NS}(x, Q^2)$ performed in [6].

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THE ROLE OF SCREENING CORRECTIONS IN SMALL x-BEHAVIOUR OF STRUCTURE FUNCTIONS

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We consider the influence of shadowing effects on the proton structure function in the small-x interval. The gluon-gluon shadowing are noticeable in the HERA kinematical region while the screening of the quark component of the structure function effects negligibly the gluon distribution. The only noticeable effect is the decreasing of sea quark densities at small-x. The explicit form of the gluon distribution in the proton depends significantly on the form of used boundary condition at $Q^2 = Q_0^2$. We consider also difference of results obtained with the help of Kuraev-Lipatov-Fadin and Altarelli-Parisi evolution equations.

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