

Polarized gluon pseudodistributions at short distances

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We present the results that are necessary in the ongoing lattice calculations of the polarized gluon parton distribution functions within the pseudo-PDF approach. We give a classification of possible two-gluon correlator functions and identify those that contain the invariant amplitude determining the polarized gluon PDF in the light-cone $z^2 \rightarrow 0$ limit. One-loop calculations have been performed in the coordinate representation and in an explicitly gauge-invariant form. We introduce the reduced Ioffe-time distribution (ITD), which requires a special construction in this case, and obtain the matching relation between the reduced ITD and its light-cone analog that is necessary for conversion of lattice data into the light-cone PDF.

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