

Higher-order QED radiative corrections to the initial state of e^+e^- annihilation processes

Explicit solutions of DGLAP evolution equations in pure QED are presented. Unpolarized QED parton distribution functions in electron are calculated in the next-to-leading order logarithmic approximation. The QED PDFs are applied to describe higher-order initial state radiative corrections to electron-positron annihilation into a virtual photon or Z boson. Numerical results are shown for the conditions of CEPC experiments.

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