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Independent amplitudes in the quark and antiquark correlators and TMDs in the covariant parton model

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Covariant parton model is a generalization of the Feyman's parton model which does not prefer any special reference system. Within the framework of covariant parton model, we study the properties of the quark and antiquark correlators determined by the equations of motion of the free partons, and derive the polarization vectors for quarks and antiquarks in mixed-spin and pure-spin states. We show that for partons in the pure-spin state, there is only one polarized and one unpolarized amplitude in each of the quark and antiquark correlator.

Submitted on behalf of a Collaboration?

No

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