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Unpolarized TMD Quark Distribution Functions at Low Q^2 Scales

We calculate the unpolarized transverse momentum dependent (TMD) quark distributions in the modified chiral quark model (χQM). To this end, we use the integrated quark densities which are multiplied by a TMD Gaussian factor[1,2]. These integrated distributions are computed applying the χQM [3] at low Q^2 value ($Q^2 = 0.35 GeV^2$). Finally, we compare our results with corresponding ones which were obtained in our previous work[4] via a different approach. It is shown that our results have appropriate treatment which is expected for the TMD quark densities.

[1] Z. Lu and B-Q Ma, Phys. Rev. D 87 (2013) 034037.

[2] M. Anselmino and et al., JHEP 04 (2014) 2005.

[3] H. Nematollahi, M. M. Yazdanpanah and A. Mirjalili, J. Phys. G: Nucl. Part. Phys. 39 (2012) 045009.

[4] H. Nematollahi, M. M. Yazdanpanah and A. Mirjalili, Eur. Phys. J. Plus 129 (2014) 204.

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