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**Lorentz invariance relation anomalies and intrinsic parton transverse momentum** FATMA ASLAN, JLab/UConn, LEONARD GAMBERG, Penn State Berks, TED ROGERS, JLab/ODU — We investigate the so-called Lorentz invariance relations for partonic correlation functions in light of renormalization and the treatment of ultraviolet divergences. We show that corrections to the Lorentz invariance relations are nontrivial even in very simple renormalizable quantum field theories. We also discuss the implications for phenomenological applications.

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