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One-loop Helicity Amplitudes for Top Quark Pair Production in Randall-Sundrum Model

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Abstract:

In this paper, we show how to calculate analytically the one-loop helicity amplitudes for the process q\bar{q} \to t\bar{t} induced by KK gluon, using the spinor helicity formalism. A minimal set of Feynman rules which are uniquely fixed by gauge invariance and the color representation of the KK gluon are derived and used in the calculation. Our results can be applied to a variety of models containing a massive color octet vector boson.

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