

Bounding the Z' tc coupling from D^0 -anti- D^0 mixing and single top production at the ILC

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Abstract content

In the present work we bound the $Z'tc$ coupling using the current experimental results for the $D^0 - \overline{D^0}$ meson mixing system. We found that the strength associated to this coupling is less than 5.75×10^{-2} . We also study the single top production for the $e^+e^- \rightarrow Z' \rightarrow tc$ process at the Z' boson resonance and found that the number of events expected must be less than 10^7 at the International Linear Collider scenario. We predict a branching ratio of the order of 10^{-2} for the $Z' \rightarrow tc$ decay.

Summary

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