

Lepton-Flavor Violating Processes $l_i \rightarrow l_j \gamma$ in Topcolor Assisted Technicolor Models

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Abstract: We consider the lepton-flavor violating (LFV) processes $l_i \rightarrow l_j \gamma$ in the framework of topcolor-assisted technicolor (TC2) models. We find that the new gauge boson Z' predicted by TC2 models can give significantly contributions to these processes via the flavor-changing couplings $Z' l_i l_j$. The present experimental bound on the LFV process $\mu \rightarrow e \gamma$ gives severe constraints on the TC2 models. Using other experimental constraints on the Z' mass $M_{Z'}$, we obtain constraints on the lepton mixing factors $K_{\tau\mu}$ and $K_{\tau e}$. The future LFV experiments will probe into TC2 models.

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Key words: lepton flavor, topcolor-assisted technicolor (TC2)

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