

# Isosinglet vectorlike leptons at $e^+e^-$ colliders

*Saturday 11 November 2023 16:15 (15 minutes)*

We study weak isosinglet vectorlike leptons that decay through a small mixing with the tau lepton, for which the discovery and exclusion reaches of the Large Hadron Collider and future proposed hadron colliders are limited. We show how an  $e^+e^-$  collider may act as a discovery machine for these  $\tau'$  particles, demonstrate that the  $\tau'$  mass peak can be reconstructed in a variety of distinct signal regions, and explain how the  $\tau'$  branching ratios may be measured.

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