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Vector-Like Leptons and Inert Scalar Triplet: Lepton Flavor Violation, $g-2$ and Collider Searches

We investigate simplified models involving an inert scalar triplet and vector-like leptons that can account for the muon $g-2$ anomaly. These simplified scenarios are embedded in a model that features W' and Z' bosons, which are subject to stringent collider bounds. The constraints coming from the muon $g-2$ anomaly are put into perspective with collider bounds, as well as bounds coming from lepton flavor violation searches. The region of parameter space that explains the $g-2$ anomaly is shown to be within reach of lepton flavor violation probes and future colliders such as HL-LHC and HE-LHC.

Scheduling Preferences

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