IRN Terascale @ Montpellier



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Asymmetries in polarized cLFV τ and μ decays in the presence of heavy sterile fermions

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In the context of Standard Model extensions via Majorana sterile fermions, the presence of additional CP violating phases (Dirac and Majorana) has been shown to be at source of important effects in charged lepton flavour violating (cLFV) transitions and decays.

Here we will consider further angular observables that can be studied for polarised τ and μ cLFV decays. These include, among others, parity asymmetries and time-reversal asymmetries for generic cLFV 3-body decays, $\ell_{\alpha}^{+} \to \ell_{\beta}^{+} \ell_{\gamma}^{+} \ell_{\delta}^{-}$. We address relevant correlations between the different classes of observables, and show that one can have sizeable asymmetries, which can be used to further probe this interesting class of SM extensions.

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Classification de Session: Beyond the Standard Model