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Search for charged lepton flavor violation at BESIII

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The charged Lepton Flavor Violation (cLFV) is highly suppressed in the Standard Model (SM) by the finite but tiny neutrino masses. Its branching fraction is calculated to be at a negligible level and so far, none has been found in experiments, including searches in lepton (μ , τ) decays, pseudoscalar meson (K , π) decays, vector meson (ϕ , J/ψ , Υ) decays, and Higgs decays etc. This talk presents the charged Lepton Flavor Violation searches at the BESIII experiment. The $J/\psi \rightarrow \tau e$ is searched for with 10 billion J/ψ events collected by BESIII and the result improves the previously published limit by two orders of magnitude.

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