

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 all the historical experiments, including searches in lepton (μ, τ) decays, pseudoscalar meson (K, π) decays, vector meson ($\phi, J/\psi, \Upsilon$) decays, Higgs decays etc. This talk reviews the charged Lepton Flavor Violation process searches at BESIII experiment. Besides the result for the decay of $J/\psi \rightarrow e\mu$ published earlier, the decay of $J/\psi \rightarrow e\tau$, with $\tau \rightarrow \pi^0 \nu_\tau$ is searched with the 10 Billion J/ψ events collected by BESIII and the result improves the previously published limit by two orders of magnitude. Future perspectives will also be discussed.

What is your topic?

Lepton universality and flavour violation

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