

## Search for charged lepton flavor violation at BESIII

*Tuesday 28 September 2021 08:00 (25 minutes)*

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 ( $\mu, \tau$ ) decays, pseudoscalar meson ( $K, \pi$ ) 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  $J/\psi$  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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