

# Charged lepton flavor violation searches at BESIII

*Friday 19 July 2024 09:21 (17 minutes)*

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 extremely small in the SM and so far no charged lepton flavour violating process has been found in experiments, including searches performed in lepton ( $\mu$ ,  $\tau$ ) decays, pseudoscalar meson ( $K$ ,  $\pi$ ) decays, vector meson ( $\phi$ ,  $J/\psi$ ,  $\Upsilon$ ) decays, Higgs decays etc. This talk presents the charged Lepton Flavor Violation searches at the BESIII experiment. The process  $J/\psi \rightarrow e\tau/e\mu$  is searched for using 10 Billion  $J/\psi$  events collected by BESIII and the result improves the previously published limit by two orders of magnitude.

## Alternate track

### I read the instructions above

Yes

**Primary author:** BIANCHI, Fabrizio

**Co-author:** YOU, Zhengyun (Sun Yat-Sen University (CN))

**Presenter:** YOU, Zhengyun (Sun Yat-Sen University (CN))

**Session Classification:** Beyond the Standard Model

**Track Classification:** 03. Beyond the Standard Model