

Search for tau LFV/LNV decays at Belle

Tuesday, 28 September 2021 08:25 (25 minutes)

We report the result of a search for $\tau \rightarrow \ell \gamma$ ($\ell = e, \mu$) using the full data sample at Belle. Charged lepton flavor violation (CLFV) is forbidden in the Standard Model but possible in several new physics scenarios.

In many of these models, the radiative decays $\tau \rightarrow \ell \gamma$ are predicted to have a sizeable probability and are thus particularly interesting CLFV channels. Consequently, we have obtained the most stringent limit on the branching fraction of $\tau \rightarrow \mu \gamma$. In addition, we report the result of a search for $\tau \rightarrow p \ell \ell$ at Belle. Any observation of processes involving Lepton number and baryon number violation would be a clear signature of new physics. Consequently, we set the most stringent limits on the branching fraction of $\tau \rightarrow p \ell \ell$.

What is your topic?

Primary author: UNO, Kenta

Presenter: UNO, Kenta

Session Classification: Session 2b: Test of fundamental symmetries with tau lepton