

May 5-9, 2025



Contribution ID: 56

Type: **Experimental poster**

Measurements of τ decays at Belle and Belle II

The Belle and Belle II experiments have collected a 1.4 ab^{-1} sample of e^+e^- collision data at centre-of-mass energies near the $\Upsilon(nS)$ resonances. This sample contains approximately 1.3 billion $e^+e^- \rightarrow \tau^+\tau^-$ events, which we use to search for lepton-flavour violating decays. We present searches for $\tau^- \rightarrow \mu^- \mu^- \mu^+$, $\tau^- \rightarrow \Lambda \pi^-$, and $\tau^- \rightarrow \bar{\Lambda} \pi^-$. We also present world leading measurements of the τ mass and lepton-flavour universality in $\tau \rightarrow \ell \nu \bar{\nu}$ decay, where ℓ is an electron or a muon.

Authors: BELLE-II COLLABORATION; SHIU, Jing-Ge (National Taiwan University (TW)); JACKSON, Paul (University of Adelaide)

Presenter: SHIU, Jing-Ge (National Taiwan University (TW))