

# Precision measurements of $\tau$ lepton decays at Belle II

*Thursday 18 July 2024 15:15 (15 minutes)*

The Belle II experiment has collected a  $424 \text{ fb}^{-1}$  sample of  $e^+e^-$  collision data at centre-of-mass energies near the  $\Upsilon(nS)$  resonances. This sample contains 389 million  $e^+e^- \rightarrow \tau^+\tau^-$  events, which we use for precision tests of the standard model. We present measurements of leptonic branching fractions, lepton-flavour universality between electrons and muons, the tau mass and the Cabibbo-Kobayashi-Maskawa matrix element  $V_{us}$ .

## Alternate track

1. Top Quark and Electroweak Physics

## I read the instructions above

Yes

**Authors:** INGUGLIA, Gianluca (Austrian Academy of Sciences (AT)); VAHSEN, Sven (University of Hawaii (US))

**Presenter:** INGUGLIA, Gianluca (Austrian Academy of Sciences (AT))

**Session Classification:** Quark and Lepton Flavour Physics

**Track Classification:** 05. Quark and Lepton Flavour Physics