

Leptonic and semileptonic decays with taus at the Belle II experiment

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The lepton flavour universality predicted by the Standard Model is challenged by various measurements of b-hadron decays involving tau and light leptons. The Belle II experiment started recording first collision data in Spring 2019 and offers a unique laboratory to study lepton flavour universality in leptonic and semileptonic decays of B mesons at high precision. In this talk, we report the status of establishing first measurements of $B \rightarrow \tau \bar{\nu}_\tau$, $B \rightarrow \mu \bar{\nu}$, and $B \rightarrow D^{(*)} \tau \bar{\nu}_\tau$ processes using the available Belle II data and discuss the future potential of investigating the $R(D^{(*)})$ anomaly.

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