Contribution ID: **310** Type: **Parallel**

Measurements of lepton-flavour universality in semileptonic B decay at Belle II

The first run of the Belle II experiment collected a 365 fb^{-1} sample of $e^+e^- \to B\bar{B}$ collisions at a centre-of-mass energy corresponding to the $\Upsilon(4S)$ resonance. These data, with low particle multiplicity, constrained initial state kinematics and excellent lepton identification, are an ideal environment to study lepton-flavour universality in semileptonic decays of the B meson. We present results on the ratios of semitauonic decay rates compared to those to light leptons in both exclusive and inclusive B decay. These include new measurements of the ratios for exclusive $B \to D^{(*)}\ell\nu$ decays $R(D^{(*)})$ in events tagged by a semileptonic B decay.

Secondary track

T09 - Beyond the Standard Model

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Session Classification: T07

Track Classification: T07 - Flavour Physics and CP Violation