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Measurements of electroweak penguin and lepton-flavour violating B decays at Belle and Belle II

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The Belle and Belle II experiments have collected a 1.1 ab^{-1} sample of $e^+e^- \rightarrow B\bar{B}$ collisions at a centre-of-mass energy corresponding to the $\Upsilon(4S)$ resonance. These data, with low particle multiplicity and constrained initial state kinematics, are an ideal environment to search for rare electroweak penguin B decays and lepton-flavour violating decays to final states with missing energy from neutrinos. Results include those of the decay $B \rightarrow K^+ \nu \bar{\nu}$ using an inclusive tagging technique. In addition, we present searches for the SM processes $B \rightarrow K^{(*)} \tau^+ \tau^-$. In addition, we present radiative B decay results. Finally, our search for the lepton-flavour violating decay $B^0 \rightarrow K_S^0 \tau^+ \ell^-$, where ℓ is an electron or muon, is described.

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