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Measurements of electroweak penguin and leptonic $B_{(s)}$ decays at Belle ($10^7 + 5^7$)

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We present the results of measurement of electroweak penguin B decays. We show the full angular analysis of $B \rightarrow K^* \ell^+ \ell^-$ to extract form factor insensitive variables such as P'_5 . The branching fraction of inclusive $b \rightarrow s \ell^+ \ell^-$ is measured with a sum-of-exclusive-modes approach. We also report searches for leptonic B decays including the lepton-flavor-violating mode: $B \rightarrow e^+ e^-, \mu^+ \mu^-, \tau^+ \tau^-, e^\pm \mu^\mp$. All the analyses are based on the full data set of Belle containing 772 million $B\bar{B}$ pairs.

A related decay $B_s \rightarrow \tau^+ \tau^-$ can also be studied by a hadronic B_s tagging tool that is being developed for the data sample of 121fb^{-1} collected at the $\Upsilon(10860)$ resonance at Belle. The method is based on a hierarchical approach in which the B_s mesons and their daughters are reconstructed in several stages, harnessing more than 100 neural network variables.

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