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Search for LFV in $B_s \rightarrow \ell \tau$ ($\ell = e, \mu$) decays at Belle

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We present a search for the lepton flavor violating decays $B_s \rightarrow \ell \tau$; $\ell = e, \mu$ using the full data sample of 121.4 fb^{-1} of data recorded on $\Upsilon(5S)$ resonance with the Belle detector at the KEKB asymmetric energy e^+e^- collider. We use $B_s \bar{B}_s$ events in which one B_s meson is reconstructed in a semileptonic $B_s \rightarrow D_s \ell \nu$ decay mode and another B_s meson is reconstructed in the signal mode. For this search, the τ lepton is reconstructed from $\tau^- \rightarrow e^- \nu_\tau \bar{\nu}_e$ and $\tau^- \rightarrow \mu^- \nu_\tau \bar{\nu}_\mu$ decay channels. We will set an upper limit on branching fraction $\mathcal{B}(UL)$ of these decays.

Session

Quark and Lepton Flavour Physics

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