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# Search for lepton universality violation in J-PARC E36 Experiment

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Abstract:

The J-PARC E36 experiment aims to search for a lepton universality violation in the ratio of decay widths,  $R_K = \Gamma(K^+ \rightarrow e^+\nu)/\Gamma(K^+ \rightarrow \mu^+\nu)$ , by adopting a stopped  $K^+$  beam method. A structure dependent (SD) radiative  $K^+ \rightarrow e^+\nu\gamma(K_{e2\gamma})$  decay is one of serious backgrounds to deduce the  $R_K$  value. The SD  $K_{e2\gamma}$  branching ratio and its decay form factor are successfully determined in the analysis. A recent progress on the analysis will be reported.