

Search for heavy neutrino in leptonic decays of K^+

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A high statistics data sample of the $K^+ \rightarrow \mu^+ \nu_\mu$ decay was recorded in 2012 by OKA collaboration. The missing mass analysis was performed to search for a decay channel $K^+ \rightarrow \mu^+ \nu_H$ with a stable heavy neutrino in the final state. The obtained missing mass spectrum does not show peaks which could be explained by existence of stable heavy neutrinos in the mass range $(220 < m_H < 375) \text{ MeV}/c^2$. Instead, we update upper limits on the branching ratio and on the value of the mixing element $|U_H|^2$.

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