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Type: Ordinary

Searches for lepton number violation and resonances in the $K^\pm \rightarrow \pi\mu\mu$ decays at the NA48/2 experiment

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The NA48/2 experiment at CERN collected a large sample of charged kaon decays into final states with multiple charged particles in 2003-2004.

A new upper limit on the rate of the lepton number violating decay $K^\pm \rightarrow \pi^\mp \mu^\pm \mu^\pm$ obtained from this sample is reported: 8.6×10^{-11} at 90% CL, which improves by more than an order of magnitude upon the previous measurements. Searches for two-body resonances in the $K^\pm \rightarrow \pi\mu\mu$ decays (including heavy neutral leptons and inflatons) in the accessible range of masses and lifetimes are also presented.

Auteur principal: MASSRI, Karim (University of Liverpool)

Orateur: MASSRI, Karim (University of Liverpool)

Classification de Session: Heavy Flavours

Classification de thématique: Experiment