

Lepton conversion study in the NA64 experiment

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The NA64 experiment at the CERN SPS is designed primarily to search for dark photons in events with missing energy. Some other similar processes that have the missing energy signature can also be searched for the Lepton flavor violation (LFV), for example $e \rightarrow \tau$, $e \rightarrow \mu$, $\mu \rightarrow \tau$ and $\mu \rightarrow e$ conversions. The NA64 is capable for search lepton conversion in the inclusive scatterings of electrons or muons on nuclei $l + (A, Z) \rightarrow l' + X$. Preliminary estimations of the NA64 sensitivity in the electron and muon beam will be performed. The probability of observing a process in an experiment based on current statistics will also be discussed.

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