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Lepton mixing under the lepton charge nonconservation, neutrino masses and oscillations and the ”forbidden” decay \muˆ− −> eˆ− + \gamma

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The lepton-charge (L_e, L_{\mu}, L_{\tau}) non-conserving interaction leads to the mixing of the electron, muon and tau neutrinos, which manifests itself in spatial oscillations of a neutrino beam, and also to the mixing of the electron, negative muon and tau lepton –which, in particular, may be the cause of the “forbidden” radiative decay of the negative muon into the electron and \gamma quantum . Under the assumption that the nondiagonal elements of the mass matrices for neutrinos and ordinary leptons, connected with the lepton charge nonconservation, are the same, and by performing the joint analysis of the experimental data on neutrino oscillations and the experimental restriction for the probability of decay \muˆ- −> eˆ- + \gamma per unit time, the following estimate for the lower bound of neutrino mass has been obtained :
mˆ{(\nu)} > 1.5 eV/cˆ2 .

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