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Mass Spectrum Dependence of Higgs-mediated mu-e Transition in the MSSM

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We study non-decoupling mu - e transition effects by Higgs-mediated contribution in the MSSM, when some SUSY mass parameters are much greater than TeV. In order to treat CP-odd Higgs mass m_A^0 as a free parameter, we consider the non-universal Higgs mass model (NUHM), and assume the only left- or right-handed sleptons had flavor-mixing mass terms.

We found it is necessary to consider Higgs-mediated contribution in the region where ordinary SUSY contribution cancels. There are some Higgs-dominant region although SUSY particle masses are around TeV scale. Moreover, the ratio of branching ratios BR(meg) / BR(maleal) drastically depends on the mass spectrum structure and chirality of flavor violation. Log factor from two split mass scale influences the way of interference between gaugino- and Higgs-mediated contributions significantly.

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