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FCNC Processes in the LHT Model: a 2009 Look

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We update our 2006-2007 results for FCNC processes in the Littlest Higgs model with T-parity. The removal of the logarithmic UV cutoff dependence in our previous results through a new contribution to Z0 penguin diagram identified by Goto

et al. and Aquila et al., while making the deviations from the SM expectations in the quark sector less spectacular, still allows for sizable new physics effects in K -> pi $nu \cdot bar nu$ and KL -> pi0 l+ l- decays and in the CP asymmetry S_[psi phi] that remains unchanged. While li -> lj

decays are essentially unaffected by these modifications, the branching ratios for decays with three leptons in the final state, like mu -> 3e are lowered by almost an order of magnitude. In spite of this, the pattern of lepton flavour violation in the LHT model can be distinguished from the one in the supersymmetric models.

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