Contribution ID: **187** Type: **Parallel Talk**

LFV in the Littlest Higgs Model with T-Parity: a Clear Distinction from SUSY

Friday 27 July 2007 14:40 (20 minutes)

Little Higgs models offer an alternative way to the solution of the little hierarchy problem. Particularly interesting is the Littlest Higgs model with T-parity (LHT). We first briefly review earlier LHT calculations of flavour violation in the quark sector. The talk's main attention is paid to the analysis of the impact of the additional particles introduced in the framework of the LHT on a wide array of lepton flavour violating (LFV) decays. These include the decays $\ell_i \to \ell_j \gamma, \tau \to \ell\pi, \eta, \eta', \mu^- \to e^- e^+ e^-$, the six three body leptonic decays $\tau^- \to \ell_i^- \ell_j^+ \ell_k^-$ and the rate for $\mu - e$ conversion in nuclei. Upper bounds for the LFV decays in question are given. Finally, we point out how parameter independent ratios of branching ratios of LFV decays can be used to distinguish the LHT from SUSY at low energy experiments.

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Session Classification: Alternatives 3

Track Classification: Alternatives