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# Yukawa unification in SUSY SO(10)

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In simple SO(10) SUSY GUT the top, bottom and tau Yukawa couplings unify at the GUT scale. It is well known that Yukawa unification (YU) consistent with radiative electroweak symmetry breaking requires non-universal scalar masses at the GUT scale. YU prefers also the negative sign of parameter \mu. However, negative \mu is typically disfavoured by the measurements of the muon anomalous magnetic moment. This is the reason why most of the studies so far have been devoted to the case of positive \mu. These studies shows that YU is very hard to obtain in a natural way when \mu is positive. We study a model in which \mu is negative, as preferred by YU, but SUSY contribition to the muon anomalous magnetic moment is positive (as preferred by the experiment). The crucial feature of our model are non-universal gaugino masses which are assumed to be generated by the F-term vev in a 54-dimensional representation of SO(10). It is shown that all the phenomenological constraints on this model can be easily satisfied while keeping SUSY spectrum light enough to be detected at the LHC. Special emphasis is given to the interplay between constraints coming from BR(b->s\gamma) and the muon anomalous magnetic moment.

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