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Radiative Lepton Masses with Dark Matter

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Leptons couple to the Higgs doublet of the standard model to acquire mass. This coupling is at tree level in the standard model, but in this talk we look at a specific model where the tree level coupling is forbidden by imposing A_4 symmetry. Therefore leptons couple to Higgs through a loop. As we will see in this talk, with radiative mass we can have loop contributions without the $16\pi^2$ loop suppression factor.

We analyze the important consequences of this scenario, including Higgs decay, muon anomalous magnetic moment, $\mu \rightarrow e\gamma$, $\mu \rightarrow eee$, and the proposed dark sector.

Summary

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