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Gauged Flavor U(1). Fermion Masses and Leptogenesis

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The neutrino data can't be accommodated within the SM.

Origin of the observed Hierarchies between charged fermion masses and CKM matrix elements remain unexplained within the SM. Also the neutrino data can't be accommodated and enough amount of the baryon asymmetry can't be generated within the SM.

We consider simple extension by non-anomalous U(1) flavor symmetry, which gives natural explanation of fermion flavor and, including the right handed neutrinos, gives successful (and very specific) neutrino oscillation scenario. Also baryon asymmetry can be generated through the low scale resonant leptogenesis.

Other interesting properties and phenomenological implications, of the proposed model, will be also discussed.

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