

## SM Extension with Anomaly Free Flavor U(1)

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Although being very successful, the Standard Models (SM) of particle physics, fails to explain some observations and also puzzles. In particular, neutrino data can't be accommodated within the SM. Also, the origin of observed hierarchies between charged fermion masses and CKM matrix elements remain unexplained 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.

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

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No

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