

FLASY 2018: 7th Workshop on Flavour Symmetries and Consequences in Accelerators and Cosmology



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What physics does the charged lepton mass relation tell us?

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It is well known that a mass relation for the charged leptons, $(m_e + m_\mu + m_\tau)/(\sqrt{m_e} + \sqrt{m_\mu} + \sqrt{m_\tau})^2 = 2/3$, is excellently satisfied by the observed masses (pole mass).

However, this excellent coincidence is just a big problem, because “mass” in a field theoretical model means a running mass, not pole mass. For this problem, Sumino has proposed a way out by introducing family gauge bosons. But his model is a model with non-anomaly free, so that the model is not so attractive.

A model with anomaly free proposed by Yamashita and Y.K. is reviewed together with recent progress.

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