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Type: **Non-Invited Talk**

Lepton masses and mixing in a two-Higgs-doublet model.

Tuesday 27 November 2018 13:55 (25 minutes)

We attempt to find a discrete, non-abelian flavour symmetry which could explain masses and mixing matrix elements of leptons beyond the Standard Model. In our preposition in comparison to the Standard Model there is no need to break flavour symmetry.

With the GAP program, we investigate all finite subgroups of the $U(3)$ group, up to the order of 1025. For the two-Higgs-doublet models we show that there is no group for which it is possible to select free model parameters in order to match the masses of charged leptons, masses of neutrinos and the Pontecorvo-Maki-Nakagawa-Sakata mixing matrix elements (see our recently published paper - links below). We show that the result doesn't depend on the nature and number of neutrinos.

The three Higgs-doublet models calculations are in progress.

Phys Rev. D article: "Lepton masses and mixing in a two-Higgs-doublet model"

ArXiv version of this article [hep/ph:1808.08384]

Content of the contribution

Theory

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