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Prospects of two-loop neutrino mass model after theta_13 measurements and LHC data

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We analyze the two-loop neutrino mass model with singly- and doubly-charged scalars. By examining the behavior of loop integral and constraint on trilinear coupling, we are able to find the extremum condition for neutrino mass parameters. By utilizing the LFV constraints and recently measured \theta_{13}, we can determine the lowest masses of the scalars. We also discuss possible connections between neutrino oscillation parameters and the decay patterns of the the scalar. Finally, we show how the perturbativity and boundedness of the scalar potential can be maintained all the way to Planck scale within this model.

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