

Higgs Decays in the Low Scale Type I See-Saw Model

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The couplings of the low scale type I See-Saw model are severely constrained by the requirement of reproducing the correct neutrino mass and mixing parameters, by the non-observation of lepton number and charged lepton flavour violating processes and by electroweak precision data. We show that all these constraints still allow for the possibility of an exotic Higgs decay channel into a light neutrino and a heavy neutrino with a sizable branching ratio. We also estimate the prospects to observe this decay at the LHC and discuss its complementarity to the indirect probes of the low scale type I see-saw model from experiments searching for the $\mu \rightarrow e\gamma$ decay.

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