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Vectorlike lepton in Higgs cascade decays: Episode I - The Three Resonances

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In models with extended Higgs sector and vectorlike leptons, the decay of a heavy Higgs boson can be dominated by cascade decays through new leptons. In this talk I will discuss these novel decay topologies focussing on a Higgs cascade decay where the SM Higgs is involved in the process. In this case we expect three resonance signals from combining the final states, which are quite promising in the search of new physics signals at the LHC.

Summary

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