

Low scale seesaw models and collider phenomenology

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Heavy neutral leptons are part of many extensions of the Standard Model, in particular seesaw models that can explain the light neutrino masses and mixing. Many search strategy have been proposed, either via the direct production of the new heavy neutral leptons or via their indirect effects in processes like lepton flavour violation. We will discuss a direct search strategy at hadron colliders based on dynamical jet vetoes and its application to the trilepton + missing transverse energy final state. We will also discuss an indirect search strategy based on the modifications of the production cross-sections of W or Higgs bosons at linear collider. These searches are complementary to other observables and would allow to probe the multi-TeV mass regime at future colliders.

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