

Searches for heavy neutral leptons: beyond simplified scenarios

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Sterile neutrinos are often present as building blocks of several neutrino mass generation mechanisms. Experimental searches depend on their masses and mixings with active neutrinos, and exclusion regions in the plane (θ_{12}, θ_{13}) resulting from such searches rely in most of the time on the assumption of the existence of one HNL which mixes (dominantly) with only one lepton flavour.

In the talk I will discuss how to reinterpret the limits from collider searches relaxing the single flavour mixing approximation, and also taking into account possible interference effect when at least two heavy neutral lepton close in mass are coupled to the active sector.

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