

Prospects of Neutrino Physics



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Testing right handed neutrinos at the linear collider

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The inclusion of heavy right-handed neutrinos to the Standard Model particle content is one of the best motivated ways to account for the observed neutrino masses and flavor mixing. The modification of the charged and neutral currents from the active-sterile mixing of the neutral leptons can provide novel signatures which can be tested at the linear collider experiment. In this talk we will explore the discovery prospect of a very heavy right handed neutrinos to probe such extensions at the future linear collider. We consider the production of the heavy neutrino via the t and s -channel processes and its subsequent decays into the semi-leptonic final states. In this talk we study a variety of prospects for the right handed neutrinos searches at the linear collider such as general parametrization and boosted object to show a discovery reach. Finally we compare our bounds on the mixing angle with the existing experimental data.

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