



Contribution ID: 85

Type: Oral presentation using Zoom

Testing the neutrino mass generation mechanism at the electron positron colliders

Wednesday, 27 October 2021 13:00 (20 minutes)

The neutrinos have tiny mass which is not predicted in the Standard Model. Therefore the extension of the SM is unavoidable. A plethora of scenarios have been proposed to explain the origin of the tiny neutrino mass which include tree level, quantum level and gauge extensions of the SM. In this talk we will discuss about the simple tree level neutrino mass models. Such models can include SM singlet heavy neutral fermionic, $SU(2)$ triplet fermionic and $SU(2)$ triplet scalar particles to describe the origin of the tiny neutrino mass and flavor mixing reproducing the neutrino oscillation data. There is another simple but interesting thought is to extend the SM using a general $U(1)$ gauge group which demands the addition of three generations of the right handed neutrinos to get the anomaly free framework. After the $U(1)$ symmetry breaking, the Majorana mass term of the RHNs are generated which can explain the origin of the tiny neutrino mass. In this talk we will discuss a variety of production channels of such beyond the SM particles at the e^+e^- colliders which are responsible for the generation of the tiny neutrino mass.

1st preferred time slot for your oral presentation

13:00-15:00 JST (6:00-8:00 CEST, 0:00-2:00 EDT, 21:00-23:00 PDT)

2nd preferred time slot for your oral presentation

15:30-17:30 JST (8:30-10:30 CEST, 2:30-4:30 EDT, 23:30-1:30 PDT)

Primary author: DAS, Arindam

Presenter: DAS, Arindam

Session Classification: H-1: BSM particle production

Track Classification: Parallel sessions: Topical Groups: Session H: BSM particle production