ILC Workshop on Potential Experiments (ILCX2021)



Contribution ID: 24

Type: Oral presentation using Zoom

Measuring neutrino physics through light higgsinos and sneutrinos

Wednesday, 27 October 2021 17:10 (20 minutes)

If nature is supersymmetric and not fine-tuned, higgsinos may well be within the reach of the ILC. In the NMSSM extended with right-handed neutrinos the right-handed sneutrino is a viable thermal dark matter candidate. We discuss how a light higgsino-type chargino could decay to a sneutrino and a charged lepton with a branching ratio $O(10^-5)$. Such a decay will be unobservable at the LHC, but in an electron-positron collider the decay can be observed. The measurement of the branching ratio would allow us to estimate the size of the neutrino Yukawa couplings.

1st preferred time slot for your oral presentation

19:00-21:00 JST (12:00-14:00 CEST, 6:00-8:00 EDT, 3:00-5:00 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)

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Session Classification: H-2: BSM particle production

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