

10th Edition of the Large Hadron Collider Physics Conference



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Type: Theory poster

Long lived NMSSM : Analysing some long-lived NSLP signatures in the NMSSM

Tuesday, 17 May 2022 19:00 (1 hour)

We analyze NMSSM scenarios containing a singlino LSP dark matter. By systematically considering several NLSP compositions, we identify and classify regions of parameter space where NLSP exhibits a long lifetime due to suppressed couplings and leads to a displaced vertex signature at the colliders. We furthermore construct viable production and decay processes at the HL-LHC to search for such displaced vertices. We illustrate a strategy to neglect the SM background with some benchmark scenarios for this type of signal.

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