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## **Inclusive Displaced Vertex Searches for Heavy Neutral Leptons at the LHC**

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The inclusion of heavy neutral leptons to the Standard Model particle content could provide solutions to many open questions in particle physics and cosmology. The modification of the charged and neutral currents from active-sterile mixing of neutral leptons can provide novel signatures in Standard Model processes. We revisit the displaced vertex signature that could occur in collisions at the LHC via the decay of heavy neutral leptons with masses of a few GeV emphasizing the implications of flavor, kinematics, inclusive production and number of these extra neutral fermions. We study in particular the implication on the parameter space sensitivity when all mixings to active flavors are taken into account. We also discuss alternative cases where the new particles are produced in a boosted regime.

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