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## Probing heavy scalar in supersymmetric final states

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We explore the supersymmetric (susy) final states coming from MSSM Higgs decaying via neutralinos and charginos, collectively called electroweakinos. They give rise to mono-(h/Z) + missing energy final states. We consider backgrounds coming from Standard Model (SM) and susy processes. The susy backgrounds have not been considered in this kind of analysis earlier, which comes from direct electroweakino production via SM mediators. Our study shows that the susy backgrounds have important ramifications in these analysis. They have appreciable production rates and significant kinematic overlap with the signal. The case of wino-like long-lived chargino decaying from MSSM Higgs is also discussed. These search can improve the sensitivity in disappearing charged track searches at the LHC because of the boost received from heavy Higgs bosons.

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