## New Physics Interpretations at the LHC 2



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## **Beyond Simplified Dark Matter Models**

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The associated ZH production at LHC is one of the most prominent paths towards an accurate understanding of the Higgs boson couplings. We focus on invisible Higgs searches and show that loop-induced components for both the signal and background present phenomenologically relevant contributions to the H to invisible limits. In addition, we discuss the constraining power of this channel to Simplified Models for Dark Matter and gauge invariant completions, such as the Pseudoscalar Portal. Notably, we show that mono-Z searches provide competitive sensitivities to standard mono-jet analyses at 13 TeV LHC

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