

Abstract Submitted
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Search for new phenomena with the $Z(\rightarrow l^+l^-)+E_T^{Miss}$ final state in pp collision at $\sqrt{s} = 13$ TeV with the ATLAS detector WEN GUO, University of Michigan — I will report a search for new phenomena in the $Z(\rightarrow l^+l^-)+E_T^{Miss}$ final state at $\sqrt{s} = 13$ TeV with the ATLAS detector. The underlying new physics signature with this final state includes (1) heavy resonance (such as heavy Higgs) decaying to two Z bosons with $ZZ\rightarrow ll\nu\nu$ final state; (2) invisible Higgs decays in association with Z boson production, where Z decays to dilepton; and (3) Mono- Z production associated with dark matter production. Data used in the analysis are from proton-proton collisions at $\sqrt{s} = 13$ TeV from the LHC, and collected by the ATLAS experiment. With no deviation observed from standard model predictions, we set upper bounds on the production cross section times branching fraction in the context of the new physics models considered.

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