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Search for chargino and neutralino production with three leptons and missing transverse momentum in the final states at $\sqrt{s} = 13$ TeV with the ATLAS detector

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A search is presented for the direct pair production of a chargino and a neutralino $pp \rightarrow \tilde{\chi}_{\pm 1} \tilde{\chi}_{0 2}$, where the chargino decays to the lightest neutralino and the W boson, $\tilde{\chi}_{\pm 1} \rightarrow \tilde{\chi}_{0 1} (W^{\pm} \rightarrow \ell^{\pm} \nu)$, while the neutralino decays to the lightest neutralino and either the Z boson $\tilde{\chi}_{0 2} \rightarrow \tilde{\chi}_{0 1} (Z \rightarrow \ell \ell)$ or the 125 GeV Higgs boson, $\tilde{\chi}_{0 2} \rightarrow \tilde{\chi}_{0 1} (h \rightarrow \ell \ell)$. The final states considered for the search have large missing transverse momentum and three isolated light leptons (electrons and muons). The analysis is based on $\sqrt{s} = 13$ TeV proton-proton collision data delivered by the Large Hadron Collider and recorded with the ATLAS detector.

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