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Z' to $t\bar{t}$ in the single lepton-final state with Atlas Open Data

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Different models of physics Beyond the Standard Model (BSM) predict different kinds of Z' bosons, motivating the search for these particles at the Large Hadron Collider (LHC). In this work, a $Z' \rightarrow t\bar{t}$ analysis in the semileptonic top quark pair channel is presented, using the ATLAS Open Data Dataset at a centre-of-mass energy of 13TeV and corresponding to an integrated luminosity of 10fb^{-1} . An event selection criteria is implemented, where acceptable agreement between the data and Monte Carlo simulated predictions is observed.

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