## 5th ComHEP: Colombian Meeting on High Energy Physics



Contribution ID: 61 Type: Short Talk (5')

## Z' to ttbar in the single lepton-final state with Atlas Open Data

Friday 4 December 2020 15:10 (5 minutes)

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  $Z' \longrightarrow t\bar{t}$  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  $10 {\rm fb}^{-1}$ . An event selection criteria is implemented, where acceptable agreement between the data and Monte Carlo simulated predictions is observed.

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Session Classification: Common Session