

ATLAS sensitivity to leptoquarks and heavy Majorana neutrinos in final states with high-pt dileptons and jets with early LHC data

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Dilepton-jet final states are used to study physical phenomena not predicted by the standard model. ATLAS discovery potential to leptoquarks and Majorana neutrinos is presented with fully-simulated ATLAS detector at the Large Hadron Collider (LHC) at

CERN. The study is motivated by the role of the leptoquark in the Grand Unification of fundamental forces and the see-saw mechanism that explains the masses of the observed neutrinos. The analysis algorithms are presented, background sources are discussed and the estimates of sensitivity and discovery potential to these processes are reported.

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