

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

Monte Carlo Study of Leptoquark Production with ATLAS detector at the LHC VIKAS BANSAL, University of Pittsburgh, ATLAS COLLABORATION — Leptoquarks provide a mechanism for Grand Unification of fundamental forces at high energies and may soon be discovered at the Large Hadron Collider (LHC) at CERN. We studied the production of these hypothetical particles in proton-proton collisions at 14 TeV with the fully-simulated ATLAS detector. We present the analysis algorithm to search for leptoquarks in their most likely decay channels that could be accessible with the first-year LHC data. We outline our algorithms of measuring the trigger and reconstruction efficiencies in a fashion independent of Monte Carlo simulation.

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Date submitted: 12 Jan 2007

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