

Abstract Submitted
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Z Boson Jet Momentum Imbalance in pp Collisions at STAR

THOMAS LIMOGES, Lehigh University; For the STAR Collaboration — Proton-proton collisions at RHIC with center of mass energy 500 GeV produce Z bosons that recoil off jets. In this analysis, Z boson transverse momentum (p_T) is compared to away-side jet p_T , and the ratio, $x_{\text{jet,Z}} = p_{T,\text{jet}}/p_{T,Z}$ is measured. Utilizing data from the STAR experiment, the invariant mass method is used to identify Z bosons from their lepton pair decays. Candidate Z bosons are selected with a narrow window around the mass peak near 90 GeV where the background contribution is significantly suppressed. Jets can be identified using the anti-kT algorithm from the Fastjet package. We find that results using STAR 2017 data can be compared with those simulated using the Pythia 8 event generator.

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