Abstract Submitted
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Search for a new dark matter boson in the ATLAS detector HARISANKAR NAMASIVAYAM, Univ of Texas, Dallas, ATLAS COLLABORATION — A search is performed for a new dark matter boson decaying to pairs of electron-positron or muon-antimuon in a final state consisting of collimated leptons, known as "Lepton jets." The analysis was performed on the data collected by the ATLAS detector at the Large Hadron Collider (LHC) with the center-of-mass energy of collision at 7 TeV. The lepton jets (pair of collimated leptons) topology is a proposed signature for the decay of hypothetical, boosted, dark matter particles. The analysis tries to test the dark matter theories that attempt to explain the astronomical observation of energetic particles observed by the PAMELA experiment.

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