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Search for dark matter from prompt lepton-jets in the electron channel

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We will present a search on dark matter particles of nearly GeV scale that decay into highly boosted set of electrons. \ These collimated set of leptons produced in the final state are called lepton-jets. \ The search is motivated by recent observations from astrophysical experiments on the anomalous excess of cosmic ray leptons. \ The analysis is performed using the data collected by the ATLAS detector from proton-proton collisions at $\sqrt{s} = 7$ TeV at the Large Hadron Collider. \ The dominant source of background are events containing energetic jets from QCD productions which mimic the signal events. \ We utilize multivariate analysis techniques to discriminate the signal against the background and perform a cut-based analysis for cross-checks.

Primary author: AHSAN, Mahsana (Department of Physics-University of Texas at Dallas-Unknown)

Presenter: AHSAN, Mahsana (Department of Physics-University of Texas at Dallas-Unknown)

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