

Abstract Submitted  
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**Large Extra dimensions in the ATLAS detector**<sup>1</sup> ESTEBAN FULLANA TORREGROSA, Argonne National Laboratory, ATLAS COLLABORATION — Large Extra dimensions in the ATLAS detector E. Fullana Argonne National Laboratory One of the open questions in the Standard Model is the seventeen orders of magnitude difference between the Planck scale and the electroweak scale. Theories of large extra dimensions explain the apparent weakness of gravitational interaction by the leakage of gravitons through extra spatial dimensions. These theories predict that gravity could play an important role at colliders when the energy scale is above the TeV scale. The ATLAS experiment is one of the four experiments at the LHC, which is the new 14 TeV proton proton collider being commissioned at CERN (Geneva, Switzerland). The determination of the jet energy scale and its uncertainty is a milestone along the path to discovery of such signals. We describe the process to determine and validate the jet energy scale and its effect on extra dimensions signatures.

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