

Abstract Submitted  
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**Cosmic muon analysis in the ATLAS detector**<sup>1</sup> MARIA BELEN SALVACHUA FERRANDO, NATHAN GARDNER, RIKUTARO YOSHIDA, Argonne National Laboratory, ATLAS GROUP @ HEP DIVISION @ ANL TEAM — We present a study of the muon to electron response in the Tile calorimeter of the ATLAS detector. The result is based on the analysis of 241,000 cosmic muons events in which we compare the energy response from the calorimeter with the momentum difference between the muon spectrometer and the inner detector. The ionization energy measurement as function of the momentum of the incoming muon is compared with the Bethe-Block prediction; the results show a good correlation between the calorimeter response and the difference between the measured momentum after and before the calorimeter.

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