

The Development and Performance of a 3D Imaging Calorimeter of DAMPE

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The Dark Matter Particle Explorer (DAMPE) satellite has been operating in space for more than one year, and considerable science data have already been obtained. The BGO Electromagnetic Calorimeter (BGO ECAL) of the DAMPE is a total absorption calorimeter that allows for a precise three-dimensional imaging of the shower shape. It provides a good energy resolution ($<1\%$ @200GeV) and high electron/hadron discrimination (>105). An Engineering qualified model was built and tested using the cosmic rays and high energy beams with energy ranging from 1 GeV to 250GeV. The status of BGO calorimeter in space will also be presented.

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