

Performance of the GLAST-LAT tracker: beam test results

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Between July and November 2006, the LAT Collaboration has performed a massive campaign of particle beam test on a Calibration Unit (CU), in order to study the tracker performance and validate the LAT Geant4 based simulation. We have tested the LAT Calibration Unit (CU) at CERN, both at PS and SPS accelerators, and at GSI . The Calibration Unit is a detector built with two complete flight spare modules, a third spare calorimeter module, five antocoincidence tiles located around the telescope and flight-like readout electronics.

The response of the tracker to minimum ionizing particles, high energy electrons, gamma ray and ions (C,Xe) in a wide energy range, has been studied. This large amount of data allowed to determine the LAT tracker performance, such as the capability to reconstruct the direction of the incident gamma-rays.