SH 10.1-7

HEAVY COSMIC RAY MEASUREMENT ABOARD SPACELAB-1

R.Beaujean, J.Krause, E.Fischer, and W.Enge
Institut für Reine und Angewandte Kernphysik
der Universität Kiel, 23 Kiel, W.-Germany

Abstract

A stack of CR-39 plastic track detectors was exposed to the cosmic radiation during the 10 days mission aboard Spacelab-1. A part of the stack was rotated one revolution within 7 days. The impact time of most of the particles was correlated with the orbit position of the shuttle and thus with geomagnetic field parameters. In this work we report on the analysis of heavy particles with charge $Z \geqslant 6$ in the energy range 50-150 MeV per nucleon with special emphasis on "geomagnetically forbidden" particles.

Keywords: Spacelab 1, heavy cosmic rays, geomagnetic field effects, plastic track detectors