30th International Cosmic Ray Conference

Contribution ID : **1181** Type : **Poster**

The BGO anticoincidence system of the PoGOLite balloon-borne soft gamma-ray polarimeter.

Wednesday, 4 July 2007 14:45 (0:00)

Abstract content

The PoGOLite balloon-borne experiment applies well-type phoswich detector technology to measurements of soft gamma-ray polarization in the 25 - 100 keV energy range. The polarization is determined using Compton scattering and photoelectric absorption in an array of 217 plastic scintillators. This sensitive volume is surrounded by a segmented Bismuth Germanium Oxide (BGO) anticoincidence shield which is designed to reduce backgrounds from charged cosmic rays, primary and atmospheric gamma-rays, and atmospheric and instrumental neutrons. A total of 427 BGO crystals with three different geometries are used, giving an overall mass of ˜350 kg. Tests of the BGO crystals are reported upon and the overall design of the anticoincidence shield is reviewed. Performance studies carried out with photon and particle beams are also described.

If this papers is presented for a collaboration, please specify the collaboration

PoGOLite Collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 2 (OG part 1), pages 483-486

Primary author(s) : Ms. MARINI-BETTOLO, Cecilia (KTH, Department of Physics, Stockholm)

Presenter(s) : Ms. MARINI-BETTOLO, Cecilia (KTH, Department of Physics, Stockholm)

Session Classification : Posters 1 + Coffee

Track Classification : OG.1.5