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In-orbit performances of the magnetic spectrometer of PAMELA

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Abstract content

PAMELA cosmic-ray detector is orbiting around the Earth on board the Resurs DK1 satellite since June 2006. The experiment is designed to study charged particles in the cosmic radiation, being optimized in particular for antiprotons and positrons. The core of the telescope is a magnetic spectrometer equipped with several detectors. Six planes of silicon microstrip sensors are placed inside the magnetic field produced by a permanent magnet. The trajectory of the charged particles which cross the sensors is reconstructed, and their momentum is determined. The sign and the absolute value of the electric charge of particles is measured too. A spatial resolution of about 3 micrometers for the bending coordinate can be obtained. Some results on the spectrometer performances in flight will be presented.

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

PAMELA

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 445-448

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