

In-Flight performances of the PAMELA satellite experiment

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PAMELA (a Payload for Antimatter Matter Exploration and Light-nuclei Astrophysics) is a satellite-borne experiment devoted to measure charged cosmic rays spectra with a particular focus on antiparticle studies. The apparatus is mounted on the polar orbiting Resurs DK-1 satellite and it is collecting data from July 2006. The low geomagnetic cut-off experienced by PAMELA allows to measure low momenta and to investigate phenomena connected with Solar and Earth physics. PAMELA comprises a time-of-flight system, a silicon-microstrip magnetic spectrometer, a silicon-tungsten electromagnetic calorimeter, an anticoincidence system, a shower tail catcher and a neutron detector. The combined information obtained from these devices allows particle identification over a wide energy range. In this talk, the detector design and the in-orbit performances are presented.

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