

The Pamela experiment on board Resurs-DK1 satellite: Status and perspectives

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PAMELA is a satellite-borne experiment with the main purpose to measure the antiparticle component of cosmic rays over an extended energy range and with unprecedented accuracy. Other physics objectives are the measurement of the galactic, heliospheric and trapped component of cosmic rays. The apparatus consists of a permanent magnetic spectrometer equipped with a double-sided silicon microstrip tracking system and surrounded by a scintillator anticoincidence system. A silicon-tungsten imaging calorimeter, complemented by a scintillator shower tail catcher perform the particle identification task. Fast scintillators are used for Time-Of-Flight measurements and to provide the primary trigger. A neutron detector is finally provided to extend the range of particle measurements to the TeV region and to complement the particle identification of the calorimeter. In this work we will describe the observational characteristics of the experiment and its current status.