

Trapped positrons and electrons observed by PAMELA experment

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Measurements of electron and positron spatial distributions in energy range from 80 MeV to several GeV below the geomagnetic cutoff rigidity were carried out using the PAMELA magnetic spectrometer. The instrument is installed on board the Resurs-DK satellite which was launched June 15th 2006 on an elliptical orbit with the inclination 70 degrees and the altitude 350-600 km. The procedure of trajectories calculations in the geomagnetic field gives a way to separate stably trapped and short lived albedo components produced in interactions of cosmic ray protons with the residual atmosphere. The work presents spatial distributions of trapped, quasitrapped and short-lived albedo electrons and positrons in the near Earth space. Electron to positron ratio points out on different production mechanism of trapped and quasitrapped particles

On behalf of PAMELA collaboration

Presentation type

Section talk (10+5 min)

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