

Charge-sign dependent solar modulation as observed by the PAMELA experiment

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The satellite-borne PAMELA experiment was launched on the 15th June 2006 from the Baikonur cosmodrome. Till January 2016 PAMELA has detected the charged component of cosmic-rays over a wide energy range measuring both particles and antiparticles. In particular, as a result of its highly inclined orbit, the instrument samples low geomagnetic cut-off regions and can explore in detail the low energy range of the galactic cosmic ray spectrum, where heliospheric effects are relevant. During about ten years of observation, solar modulation of positively and negatively charged particles has been observed under different solar activity conditions: from the whole $A < 0$ solar minimum of cycle 23/24, through the polarity reversal of the heliospheric magnetic field, to the solar maximum of solar cycle 24. Observations of time-dependent electron and positron spectra will be presented. The study of their different response to the solar activity variations can provide useful information about the charge-sign dependent effects.

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