

The main results of the PAMELA space mission in cosmic ray measurements and its current status

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As of today, the PAMELA experiment is widely known amongst the researchers specializing in the physics of cosmic rays. Application of obtained scientific results ranges from hypothetical dark matter particles, to galactic objects and properties of interstellar medium, solar and solar-terrestrial physics, as well as physics of near-Earth space. Despite the end of the flight stage of the experiment in 2016, large amounts of unique data are still being processed and analyzed today. In this talk we present an overview of the already obtained results, discuss their impact on the cosmic ray physics and adjacent fields of study, and describe the status of the ongoing research, that still holds the importance to both the fundamental and applied physics. We also propose some in-development theoretical models, which are partly based on the obtained experimental results.

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