

Measurements of galactic CR energy spectra with the DAMPE space mission

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The DArk Matter Particle Explorer (DAMPE) is a space-based particle detector launched on December 2015 from the Jiuquan Satellite Launch Center, in China and since then smoothly operating in a Sun-synchronous orbit. The main goals of the DAMPE mission include the study of the Cosmic-Ray Electron-positron (CRE) energy spectrum, the study of galactic cosmic-rays (CR), gamma-ray astronomy, and indirect dark matter search. The large acceptance and the detector figures make DAMPE able to measure the CREs and gamma-rays spectra up to few TeV, and cosmic-ray nuclei spectra up to hundreds of TeV, with unprecedented energy resolutions. This high-energy region is important in order to search for CREs sources, for dark matter signatures in space, and to have a better understanding of CR acceleration and propagation mechanisms inside the Galaxy. An overview of the DAMPE mission will be presented, along with main results and ongoing activities, with particular focus on CR spectral measurements.

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