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Solar modulation of cosmic ray electron and positron flux up to 15 GeV measured with DAMPE

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The DArk Matter Particle Explorer (DAMPE) is a satellite-borne cosmic particle detector which was launched on Dec. 17th, 2015 into a sun-synchronous orbit with the tilt angle of 97.4 degree. The high energy resolution and large geometric acceptance make the detector suitable for the cosmic ray electron (plus positron) measurement. In this work, the time-dependent electron flux was measured during the solar cycles 24 and 25 (since the beginning of 2016 up to the end of 2024), including the minimum phase of the former one. The result is helpful for studying the transportation process of cosmic ray electrons in the Heliosphere and the underlying interactions.

Collaboration(s)

DAMPE Collaboration

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