

High-resolution two-dimensional map of the solar-time anisotropy obtained by the GRAPES-3 large-area muon telescope

Wednesday 21 July 2021 13:12 (12 minutes)

In analyzing the anisotropy of galactic cosmic rays below 1 TeV, graphs with time as the horizontal axis frequently represent the cosmic ray intensity variations. Therefore, the anisotropy is often misinterpreted as a “temporal variation,” even though essentially regarded as a “spatial distribution.”

This paper presents a high-resolution two-dimensional map of the solar-time anisotropy using the GRAPES-3 large-area muon telescope at Ooty, South India, which has an excellent capability of observing the muon intensity in 169 subregions within a 45-degree zenith angle with a temporal resolution of 4 minutes.

Keywords

Solar modulation, muon telescope

Collaboration

other Collaboration

GRAPES-3

Subcategory

Experimental Results

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Session Classification: Discussion

Track Classification: Scientific Field: SH | Solar & Heliospheric