



Contribution ID: 281

Type: **Talk**

Measurements of cosmic-ray anisotropy using LHAASO-WCDA

Tuesday 15 July 2025 14:35 (15 minutes)

The cosmic-ray anisotropy is now used to help unveil nearby cosmic-ray accelerators and their local propagation environment. The LHAASO-WCDA experiment is composed of three water ponds. It covers a total detection area of 87000 m^2 , which makes it an ideal detector for measuring the cosmic-ray anisotropy from hundreds of GeV to $\sim \text{PeV}$. In this talk, we present the measurements of the cosmic-ray anisotropy using three years of WCDA data. We extended our measurement to the lower energy, about 600 GeV. We find a significant energy dependence of the dipole component of the sidereal-time anisotropy below several TeV. Meanwhile, we also find the remarkable influence of solar activities on the solar-time anisotropy at sub-TeV.

Collaboration(s)

LHAASO Collaboration

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Session Classification: CRI

Track Classification: Cosmic-Ray Indirect