

Measurement of UHE Diffuse Gamma-ray Emission with LHAASO-KM2A

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The diffuse Galactic γ -ray emission (DGE), mainly produced via interactions between cosmic rays and the interstellar medium or radiation field, is a very important probe of the distribution, propagation, and interaction of cosmic rays in the Milky Way. However, the spectrum of DGE over 10TeV has not been well measured in the past decades due to the demanding of higher sensitivity. Recently, we have reported the measurements of DGE from 10TeV to 1PeV energies with LHAASO-KM2A experiment. In our result, the spectrums of two selected sky regions were obtained with a high significance and accuracy. Based on our results, some discrepancies between the measurements and theoretical predictions are found. They might imply that either additional emission sources exist or cosmic ray intensities have spatial variations.

Collaboration (if any)

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