

Characterizing the isotropic diffuse gamma-ray flux (10-300 TeV) by the GRAPES-3 experiment

Friday 16 July 2021 19:18 (12 minutes)

A diffuse gamma-ray emission at ~ 100 TeV can be expected as a result of the interactions of ultra-high-energy cosmic rays (UHECRs) with the cosmic microwave background (CMB) during their propagation. This radiation carries the information on the distribution of energetic sources and hence the cosmological evolution of the Universe. The GRAPES-3 is an extensive air shower (EAS) array, located at Ooty in southern India. It consists of 400 plastic scintillators (each 1 m^2) and a large area (560 m^2) muon telescope. The muon telescope has the ability to differentiate the gamma-rays from charged cosmic rays through their muon content. We report on the study of isotropic diffuse gamma-ray flux from GRAPES-3 over 10–300 TeV.

Keywords

diffuse radiation; gamma-rays; grapes-3; extensive air shower

Collaboration

other (fill field below)

other Collaboration

GRAPES-3

Subcategory

Experimental Results

Primary author: Mr PANT, Bhanu (Indian Institute of Technology, Jodhpur)

Co-author: FOR THE GRAPES-3 COLLABORATION

Presenter: Mr PANT, Bhanu (Indian Institute of Technology, Jodhpur)

Session Classification: Discussion

Track Classification: Scientific Field: GAI | Gamma Ray Indirect