

Gamma-Ray Astronomy with Ground-Based Particle Detection Arrays

Monday, 25 July 2022 11:30 (30 minutes)

In recent years, significant improvements in the sensitivity and image resolution of gamma-ray sky surveys provided by the current generation of ground-based particle detection arrays has led to groundbreaking discoveries. Among these discoveries are the detection of an unprecedented number of PeVatron candidates, multi-TeV gamma-ray emission associated with particle acceleration in the jets of a micro-quasar, and a new source class, gamma-ray halos, which are produced by electrons and positrons accelerating in the vicinity of pulsars, diffusing outside the classical pulsar wind nebulae, and then interacting with the ambient radiation field. In this talk I will cover the current status, latest results and future plans for gamma-ray astronomy with ground-based particle detection arrays.

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Session Classification: Invited highlights

Track Classification: invited highlight