

Observation of multi-ten TeV to sub-PeV gamma rays from the HESS J1843-033 region with the Tibet air shower array

Tuesday, 26 July 2022 15:00 (15 minutes)

HESS J1843-033 is an unidentified TeV gamma-ray source reported by H.E.S.S. Galactic Plane Survey (Hoppe, ICRC2008, H.E.S.S. Collaboration, A&A 612, A1, 2018). In the adjacent region, HAWC and LHAASO also discovered high-energy gamma-ray sources (Abeysekara et al., PRL 124, 021102, 2020; Cao et al., Nature 594, 33, 2021), but their origins remain unclear, and the relation of these gamma-ray emissions is not discussed yet. In this talk, we present the detailed results of the observation of gamma rays in the multi-ten TeV to sub-PeV energy range from the HESS J1843-033 region with the Tibet air-shower array and the underground muon-detector array, including the discussion about the origin of the gamma-ray emission and its association with some nearby celestial sources.

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Session Classification: Parallel 2

Track Classification: GA