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Study of the eHWC J1825-134 at the Highest Energy with HWAC

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eHWC J1825-134 is one of the brightest Galactic gamma-ray sources above 50 TeV observed by High Altitude Water Cherenkov Gamma-Ray Observatory (HAWC). Detailed morphological studies have revealed a new point-like source inside this region with a spectral energy distribution extending beyond 200 TeV without any cutoff. These very-high-energy gamma rays emission can originate from leptonic or hadronic processes. The new point-like source is located in a region containing PWNe and a high density giant molecular cloud [MML2017]99. If the source emission is associated with the hadronic scenario the TeV gamma rays may have been produced by cosmic rays colliding with ambient gas. If this were the case, eHWC J1825-134 is an indicator of the existence of a galactic PeVatron in the region that accelerates particles up to PeV energies.

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Primary authors: HUANG, Dezhi (Michigan Technological University); Mr SALESA GREUS, Francisco (IFIC); CASANOVA, Sabrina (IFJ PAN & MPIK HD); Dr HUENTEMEYER, Petra (Michigan Technological University)

Presenter: HUANG, Dezhi (Michigan Technological University)

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