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The young massive stellar cluster Westerlund 1 in gamma rays as seen with H.E.S.S.

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Massive stellar clusters have recently been hypothesised as candidates for the acceleration of hadronic cosmic rays up to PeV energies. Previously, the H.E.S.S. Collaboration has reported about very extended gamma-ray emission around Westerlund 1, the most massive young stellar cluster in the Milky Way. In this contribution we present an updated analysis that employs a new analysis technique and is based on a much larger data set, allowing us to constrain better the morphology and the energy spectrum of the emission. The analysis technique used is a three-dimensional likelihood analysis, which is especially well suited for largely extended sources. The origin of the gamma-ray emission will be discussed in light of recent multi-wavelength observations.

Keywords

HESS; stellar cluster; PeVatron; Gammapy

Collaboration

H.E.S.S.

other Collaboration

Subcategory

Experimental Results

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