

PeVatron in the Galact Center

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The Galactic Centre region has been observed by the High Energy Stereoscopic System (H.E.S.S.) array of ground-based Cherenkov telescopes since 2004 leading to the detection of the very-high-energy (VHE, $E > 100$ GeV) gamma-ray source HESS J1745–290 spatially coincident with the supermassive black hole Sgr A*. Diffuse TeV gamma-ray emission has been detected along the Galactic plane, most likely due to hadronic cosmic-ray interactions with the dense gas of the Central Molecular Zone. The rich 2004-2013 dataset permits detailed spectral and morphological studies of diffuse emission in the inner 200 pc of the Galactic Centre region. The new results permit to make an important statement regarding the location and origin of the accelerator of PeV protons. The H.E.S.S. observations of the Galactic Centre region will be discussed in the context of the origin of Galactic cosmic rays.

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