

New insights towards the Galactic center from HESS

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The Galactic center is one of the richest region in the Galaxy harboring the supermassive black hole Sagittarius A* surrounded by the Central Molecular Zone (CMZ), several supernova remnants, pulsars wind nebulae (PWNe), and star forming regions. TeV emission was revealed from individual sources (HESS J1745-290, the PWN G0.9+0.1, HESS J1746-285) and from the CMZ itself. In the CMZ the emission likely originates from cosmic rays pervading the Galactic center region and interacting with the dense gas. We present the first 3D analysis of the Galactic center region using 12 years of H.E.S.S. data and the Gammapy open-source analysis package. This analysis allows to extract for the first time, using a common field-of-view source modeling, the intrinsic spectra of the known H.E.S.S. sources HESS J1745-290, the PWN G0.9+0.1, HESS J1746-285 and HESS J1741-302.

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