

The H.E.S.S. Galactic plane survey

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The H.E.S.S. (High Energy Stereoscopic System) Galactic plane survey (HGPS) was performed with the H.E.S.S. I Cherenkov telescope array in Namibia from 2004 to 2013. Roughly ~ 2800 hours of high-quality observations of the Galactic disk are available in the Galactic longitude range 250 to 65 degrees and Galactic latitude range $|b| < 3.5$ degrees. This is the first high-resolution (~ 0.1 deg) and sensitive ($\sim 2\%$ Crab nebula point-source sensitivity) survey of the Milky Way in TeV gamma-rays. The HGPS has revealed a diverse population of cosmic accelerators in the Galaxy, from which we have compiled a catalog of 77 very-high-energy ($E > 0.1$ TeV) γ -ray sources.

In this presentation, we will show the latest survey maps and describe the source catalog construction method and results from the HGPS paper. Source population statistics and the associations of H.E.S.S. sources with known pulsars, pulsar wind nebulae, supernova remnants and binary systems as well as GeV sources detected by the Fermi-LAT will be discussed, along with the discovery of some new sources reported here for the first time.

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