

H.E.S.S. precision measurements of the SNR RX J1713.7–3946

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on behalf of the H.E.S.S. Collaboration

The shell-type supernova remnant RXJ1713.7–3946 is one of the brightest TeV gamma-ray sources in the Galaxy detected by the High Energy Stereoscopic System (H.E.S.S.). Despite extensive multi-wavelength coverage in gamma-rays, X-rays and lower energy regimes, the nature of the underlying gamma-ray radiation mechanisms is still under debate. Here we present new precision measurements obtained with the H.E.S.S. array in its 4-telescope configuration, based on 150 hours of observations and the usage of more sensitive analysis techniques. The new results feature an improvement in the exposure by factors of 2 (sky images) to 4 (spectra) over previous measurements, allowing for spectral and morphological studies at unprecedented precision, and yielding the most detailed TeV gamma-ray analysis of any extended object in the sky. The angular resolution, better than 0.05 deg, enables for the first time a detailed investigation of morphological differences between TeV gamma rays and X-rays.

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Further details will be available in an upcoming publication by the H.E.S.S. Collaboration.

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