

Analysis of Gamma-ray Binaries LSI+61303 and LS5039 Utilizing LHAASO Detector

Gamma-ray binaries, characterized by a massive star and a compact object in close orbit, emit gamma rays across a wide energy spectrum. LSI+61303 and LS5039 are captivating gamma-ray binaries, known for their intricate behavior. This study utilizes the advanced capabilities of the Large High Altitude Air Shower Observatory (LHAASO) detector to analyze the gamma-ray emission from LSI+61303 and LS5039. The analysis extends the spectral study to energies up to a hundred TeV, providing insights into the high-energy emission regime. Additionally, consistent phase modulation patterns, in line with observations from the Fermi satellite, are observed. These findings enhance our understanding of gamma-ray binaries and shed light on the emission mechanisms and physical processes at play in LSI+61303 and LS5039.

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