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## High energy gamma-ray study of the microquasar 1E 1740.7-2942 with Fermi-LAT

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The microquasar 1E 1740.7-2942, discovered by the Einstein satellite, is located near the Galactic Center at an angular distance of 50' from Sgr A\*, and the brightest X-ray source above 20 keV in the Galactic Center region. It has extended radio lobes reaching distances of up to a few parsecs and its core radio emission is variable. In X-ray energies it shows the spectral and timing properties similar to those of black hole candidates like Cyg X-1.

GRANAT/SIGMA reported a burst of soft gamma-ray emission (300-600 keV) in 1990s which was interpreted as an electron-positron annihilation signal, but other satellite observations could not confirm the high energy feature reported by SIGMA, although a high energy tail extending up to 600 keV with a power-law photon index of  $1.9 \pm 0.1$  has been reported by INTEGRAL, indicating a non-thermal process which might accelerate particles to even higher energies.

In this paper we report the result of gamma-ray study of 1E 1740.7-2942 above 100 MeV using the six-year Fermi-LAT archival data, and its implication on particle acceleration process in microquasars is discussed.

### Collaboration

– not specified –

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