

# The Origin of Gamma-ray Emission from Circinus Galaxy

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The Circinus galaxy is a nearby composite starburst/active galactic nucleus (AGN) system. In this work we re-analyze the GeV emission from Circinus with 10 years of Fermi-LAT data. Our 0.1–500 GeV flux is several times lower than that reported in previous literature, which is roughly in compliance with the empirical relation for star-forming and Local Group galaxies and might be reproduced by the interaction between cosmic rays and the interstellar medium. The ratio between the  $\gamma$ -ray luminosity and the total infrared luminosity is near the proton calorimetric limit, indicating that Circinus may be a proton calorimeter.

## Keywords

## Collaboration

## other Collaboration

## Subcategory

Experimental Results

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