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Constraints on particle acceleration in Rosette and Orion nebulae with Fermi-LAT observations

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Rosette and Orion nebulae are two young massive star clusters in which no supernova explosion has occurred yet. That makes two very good candidates to study particle acceleration in a super bubble induced by the collective effects of stellar winds. Using data from Fermi-LAT and a phenomenological model, upper limits on the fraction of mechanical energy converted into accelerated particles have been obtained. The potential gamma-ray flux have been finally compared to the HESS-II and CTA Cherenkov telescopes sensitivities.

Collaboration

– not specified –

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