

# Fermi-LAT observations of diffuse gamma-ray emission

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Cosmic rays are a probe of the most energetic processes in the Universe and may encode signatures of dark-matter particles annihilation or decay. The Large Area Telescope on board the Fermi Gamma-ray Space Telescope indirectly traces cosmic rays throughout the Galaxy thanks to the diffuse gamma-ray emission produced by inelastic collisions of cosmic-ray nuclei with interstellar gas and by electrons and positrons that undergo bremsstrahlung or inverse-Compton scattering. I will review the main results from Fermi in the field with focus on the uncertainties of the backgrounds for dark-matter searches.

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**Primary author:** Dr TIBALDO, Luigi (KIPAC-SLAC, Stanford University)

**Co-author:** Prof. BLOOM, Elliott (KIPAC-SLAC, Stanford University)

**Presenter:** Dr TIBALDO, Luigi (KIPAC-SLAC, Stanford University)

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