

SPECTRAL CUTOFFS IN EGRET GAMMA-RAY SOURCES

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The EGRET instrument has measured detailed photon spectra between 30 MeV and 10 GeV, which are represented by means of single power-law fits for sources in the 3EG catalog. However, various sources show indications of spectral cutoffs at GeV energies, which are poorly represented by such simple fits. In the case of well exposed or bright EGRET sources, a description of spectral cutoffs with more complicated functional forms appears to be applicable. An application for such multicomponent fits should be seen in extrapolations beyond the energies accessible to EGRET, i.e. for detectability studies of low-threshold Imaging Atmospheric Cherenkov Telescopes (IACTs). In cases of unidentified gamma-ray sources positionally coincident with Supernova remnants, the spectral shape beyond power-law extrapolations might explain why such prominent SNRs like γ Cygni, IC 443 and CTA1 have not been detected during several observation campaigns performed by IACTs over the last years.