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Unidentified EGRET sources and their possible Fermi counterparts

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Unidentified EGRET sources from 3EG catalog have been analyzed. Preliminary data analysis has shown at least 31 of these sources coincide with those in 3FGL Fermi catalogue within 1,2 and 3 sigma error intervals of the coordinates and fluxes. Their properties are discussed in the presented work. Even 3-sigma difference allows supposing sources similarity because of more than 3-sigma distinctions in values of fluxes between identified EGRET sources and their Fermi counterparts. For instance, the coincidence between 3EG J1255-0549 and J1256.1-0547 was reported in Fermi catalogues 1FGL, 2FGL, 3FGL. However, these sources fluxes (in units of 10ˆ-8 photons × cmˆ-2 × sˆ-1) in the energy band E > 100 MeV are 179.7±6.7 (3EG), 44.711±0.724 (3FGL), 53.611±0.997 (2FGL) and 67.939±1.861 (1FGL). Such effect observed for sufficient portion of identified EGRET sources. It could cause by troubles of particles identification by Fermi/LAT trigger system. Very often charged particles recognized as gamma-quanta because of wrong backsplash analysis. Nevertheless, gammas counts as charged particles due analogous reason and rejected during ground data processing. For example, it appears as geomagnetic modulation presence on gamma-quanta count rate latitudinal profiles in energy band E>20 MeV.

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