

Unidentified EGRET sources and their possible Fermi counterparts

Tuesday, 11 October 2016 15:15 (30)

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 10^{-8} photons \times cm $^{-2}$ \times s $^{-1}$) 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 backslash 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.

Primary author(s) : Mr. LYAPIN, Alexander (National Research Nuclear University "MEPhI")

Co-author(s) : Mrs. ARKHANGELSKAJA, Irene (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute))

Presenter(s) : Mr. LYAPIN, Alexander (National Research Nuclear University "MEPhI")

Session Classification : Poster session - II

Track Classification : Cosmic rays