It is seen that after cosmological correction bursts with maximum registered energy mostly shifted to region correspond on event duration to intermediate GRBs. Unfortunately only 55 LAT GRBs have information both about redshifts and $t_{\text{up}}$.

For next analysis we introduce new value $R_{t}$ ratio of maximum energy photon arrival time to burst duration and this value not required cosmological correction. The distribution of LAT GRBs on $R_{t}$ and $t_{\text{up}}$ is presented at figure 5. The investigation results conclude 2 long GRBs subgroup exist, so limit where maximum energy photon arrival time is equal to event duration. The bursts distribution on high energy episode $E_{\gamma}$ distribution and $t_{\text{up}}$ is shown at figure 6. Using this parameter also it is possible to distinguish two subtypes of GRBs. During first subtype events high energy emission duration interval smaller than $t_{\text{up}}$. Second subtype characterized longer period of high energy emission than $t_{\text{up}}$. But second subtype bursts also did evolve before subgroup for high energy photon with maximum energy arrived within $t_{\text{up}}$ and for other (b) such photon was registered later than $t_{\text{up}}$. Such GRBs examples are shown at figure 7.

Furthermore, interval of such burst $t_{\text{up}}$ more than typical time mentioned as high energy afterglow, it is not prompt emission. For example, the high energy gamma emission during GRB090902 began after more than 100 sec following burst end and was observed for about 150-200 sec [33].

Also subTeV emission has characteristics the same as $t_{\text{up}}$. MAGIC start registration of GRB190114C about 50 s after the trigger and detected > 300 GeV photons for the first 20 s of the subTeV data [21]. During first subfeature subTeV emission highest energy photon arrived at about 10 s after the burst trigger and detected >400 GeV photons at such late time interval [24]. During GRB 160821B MAGIC detected subTeV subphoton energy to >10 s after burst trigger [25]. Thus, all observed high-energy photons in subTeV region could be interpreted as afterglow at least for GRB 070174a, GRB190114C, GRB160720B and GRB160821B and subTeV prompt emission was not registered during GRB. GRB160821B is near $\gamma=0.16$ [21] short burst, $t_{\text{up}}=0.48 s$ is in energy region ($1-20$) TeV on Swift/BAT data [25] but $t_{\text{up}}=1 s$ in energy band 50-300 keV on Fermi GBM data [26], GRB190114C and GRB160821B are near $\gamma=0.4245$ and $\gamma=0.653$ correspondingly long bursts with duration more than 120 s [17,18] and 150 s [27,28] respectively. Redshift measurement for analyzing an additional parameter and at least two long GRBs subgroup were separated with different characteristic distances $z \approx 1.1$ and $z=2.2$. Moreover, preliminary results of analysis allow concluding intermediate GRBs have more high redshift.