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Intermediate GRBs as observed by various satellite experiments

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Usually two GRBs groups separated in duration distribution: short and long. These types events classified due analysis of duration of interval which the integrated counts from the GRB raise from 5% to 95% (t_{90}). The value $t_{90} \sim$ 2s used as boundary between short and long events. Firstly GRB duration distribution was analysed on data of BATSE experiment onboard the (CGRO) Compton Gamma Ray Observatory ($\sim$ 2700 bursts) operated from April 1991 until to June 2000. However in 1999 third burst subgroup (intermediate GRBs) was found due GRBs duration and duration-hardness distributions analysis of 4B current BATSE catalogue (recently available as 5B one) in interval 1˜s˜$\leq t_{90} \leq$ 40˜s.

Since CGRO operation finished five satellite experiments GRBs catalogues (Wind, Suzaku, RHESSI, Swift/BAT and Fermi/GBM) contain sufficient amount of bursts for duration distribution precision investigation. The results of these distributions analysis are discussed. It allows concluding the appearance of intermediate GRB subgroup on data of six experiments: BATSE/CGRO, Wind, Suzaku, RHESSI, Swift/BAT and Fermi/GBM.

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