A perspective of gamma-ray bursts registration due to gamma-telescope GAMMA-400

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Several thousands of gamma-ray bursts were observed by various experiments, but their sources of origin still remain unclear up to now. During several GRBs very high-energy photons were detected both in space and ground-based experiments (up to some tens of GeV and up to some TeV, respectively). The GAMMA-400 project will be the new generation of satellite gamma-observatory. Three apertures provide events registration from both upper and lateral directions: main, additional and lateral ones. Its characteristics are better than existing instruments both satellite and ground: energy resolution ($\sim$2% at $E\gamma$ = 102 GeV), detectors dead time is better than 50 mks, data storage quota $\sim$ 100 GB per day. But fine angular resolution ($\sim$10° at $E\gamma$ = 20 MeV, $\sim$0.1° at $E\gamma$ = 10 GeV, $\sim$0.01° at $E\gamma$ = 102 GeV) will be provided only for high energy events registered in the main aperture in the energy band from $\sim$10 GeV to several TeV. It allows making more effective observations of GRBs (better signal to noise ratio), more detailed study of its high energy afterglow due long term measurements (because of high apogee orbit provides low background variations with time) and detailed analysis of the sources luminosity variability (spectral, angular and temporal).

Primary author(s) :   ARKHANGELSKAJA, Irene (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)); Prof. GALPER, Arkady; YURKIN, Yury (NRNU MEPhI); Dr. TOPCHIEV, Nikolay; SUCHKOV, Sergey (Lebedev Physical Institute); CHASOVIKOV, Evgeniy (National Research Nuclear University "MEPhI" (Moscow Engineering Physics Institute)); KHEYMITS, Maxim (NRNU MEPhI); LEONOV, Alexey (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)); RUNTSO, Michael (NRNU MEPhI); BAKALDIN, Alexey (Scientific Research Institute of System Analysis of the Russian Academy of Sciences); EGOROV, Andrey (Lebedev Physical Institute); Mr. GUSAKOV, Yurii (NRNU MEPhI, JINR); Prof. STOZHKOV, Yuri; O.DALKAROV, OLEG (P.N.Lebedev Institute); CHERNYSHEVA, Irina (NRNU MEPhI); ZVEREV, valery (mephi); NAUMOV, Peter (NRNU MEPhI); ARKHANGELSKIY, Andrey (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute))

Presenter(s) :   ARKHANGELSKAJA, Irene (National Research Nuclear University MEPhI (Moscow Engineering Physics Institute))

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