# The GAMMA-400 gamma-ray telescope for precision gamma-ray emission investigations 

Friday, 9 October 2015 08:00 (25)


#### Abstract

The GAMMA-400 gamma-ray telescope with excellent angular and energy resolutions is designed to search for signatures of dark matter in the fluxes of gamma-ray emission and electrons + positrons. Precision investigations of gamma-ray emission from Galactic Center, Crab, Vela, Cygnus, Geminga, and other regions will be performed, as well as diffuse gamma-ray emission, along with measurements of high-energy electron + positron and nuclei fluxes. Furthermore, it will study gamma-ray bursts and gamma-ray emission from the Sun during periods of solar activity. The GAMMA-400 energy range is expected to be from ${ }^{2} 20 \mathrm{MeV}$ up to TeV energies for gamma rays, up to 10 TeV for electrons + positrons, and up to 10 E 15 eV for cosmic-ray nuclei. For $100-\mathrm{GeV}$ gamma rays, the GAMMA-400 angular resolution is $\sim_{0.01}{ }^{\circ}$ and energy resolution is $\sim 1 \%$; the proton rejection factor is $\sim 5 \times 10 \mathrm{E} 5$. GAMMA-400 will be installed onboard the Russian space observatory.


## Presentation type

Plenary ( $25+5 \mathrm{~min}$ )

Primary author(s): Dr. TOPCHIEV, Nikolay (Lebedev Physical Institute)
Co-author(s) : Prof. GALPER, Arkadiy (NRNU MEPhY)
Presenter(s): Dr. TOPCHIEV, Nikolay (Lebedev Physical Institute)
Session Classification : Cosmic rays - plenary II

Track Classification : Cosmic rays

