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

Friday, 9 October 2015 08:00 (25)

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 ˜20 MeV up to TeV energies for gamma rays, up to 10 TeV for electrons + positrons, and up to 10E15 eV for cosmic-ray nuclei. For 100-GeV gamma rays, the GAMMA-400 angular resolution is ˜0.01° and energy resolution is ˜1%; the proton rejection factor is ˜5x10E5. GAMMA-400 will be installed onboard the Russian space observatory.

Presentation type

Plenary (25+5 min)

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