

SiPM-based Gamma-Ray Detectors of GECAM

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The Gravitational Wave High-Energy Electromagnetic Counterparts All-sky Monitor (GECAM) is a space mission dedicated to detecting gamma-ray bursts associated with gravitational wave events and various cosmic phenomena. GECAM consists of several satellites, with three currently in orbit and a fourth scheduled for launch in 2024. GECAM has yielded numerous scientific discoveries, including the observation of the most intense gamma-ray burst recorded to date. SiPM-based compact detectors are a critical component of GECAM, representing the first extensive application of SiPM technology in a spaceborne gamma-ray scientific satellite. This report will initially present the status of GECAM and the achieved observational results. It will then concentrate on the detector's design, in-flight performance, irradiation damage to SiPMs and mitigation strategies, as well as outline future plans.

Collaboration

Role of Submitter

I am the presenter

Primary author: SUN, Xilei (Institute of High Energy Physics, CAS)

Presenter: SUN, Xilei (Institute of High Energy Physics, CAS)

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