

A dedicated SiPMs array for GRD of GECAM

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The discovery of gravitational waves and their gamma bursts has opened the era of multi messenger astronomy. China's Gravitational wave high energy Electromagnetic Counterpart All-sky Monitor (GECAM) uses two small satellites to monitor gamma-ray bursts in an all-sky field of view. It has a quasi-real-time gamma-ray burst broadcast capability and will play an important role in the location of gravitational wave sources and subsequent observations. Each GECAM small satellite is equipped with 25 3-inch diameter gamma ray detectors (GRD), which can cover 8 keV-2 MeV. GRD uses SiPMs instead of PMT to adapt to the size constraints of micro-satellite platforms, and uses high light yield lanthanum bromide crystals to lower the threshold to 8 keV. A unique 3-inch circular SiPMs array has been designed, using 64 6x6 mm chips, uniformly arranged in a circular shape. This presentation will introduce the status of GECAM and then focus on the SiPMs array, includes its design and performance.

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