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SiPM development for astroparticle physics applications

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Abstract content

SiPM is the novel solid state photodetector which can be operated in the single photon counting mode. It has excellent features, high quantum efficiency, good charge resolution, fast response, very compact, high gain of 10^6 , very low power consumption, immune to the magnetic field and low bias voltage, typically 60V. Drawbacks of this device are currently the large dark current, crosstalk between micro pixels and relatively low sensitivity to UV and blue light. Last several years, we have developed large size SiPM (9mm^2 and 25mm^2) for the applications in the imaging atmospheric cherenkov telescopes (MAGIC and CTA) and in the fluorescence telescope (EUSO). In the conference, the current status of SiPM development by MPI and MEPhI will be presented.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 5 (HE part 2), pages 985-988

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