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The ABALONE Photodetector

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The ABALONE is a new type of photosensor produced by PhotonLab with cost effective mass production, robustness and high performance. This modern technology provides sensitivity to visible and UV light, exceptional radio-purity and excellent detection performance in terms of intrinsic gain, afterpulsing rate, timing resolution and single-photon sensitivity. This new hybrid photosensor, that works as light intensifier, is based on the acceleration in vacuum of photoelectrons generated in a traditional photocathode and guided towards a window of scintillating material that can be read from the outside through a Silicon PhotoMultiplier (SiPM). In this contribution we present the extensive characterization of the ABALONE as a possible photosensor for future astroparticle physics experiments

Collaboration

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