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Neutron Irradiation Effects on SiPM

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Silicon Photomultipliers (SiPMs), which operate in Geiger mode, are widely used in high energy physics experiments due to their excellent photon detection capabilities. However, their performance can degrade when exposed to high radiation environments which may significantly impact experimental results.
In this study, we investigate the radiation induced performance degradation of two different types of SiPMs by comparing their characteristics before and after neutron irradiation. Key performance metrics including IV characteristics, single photon electron, and LED Response current levels were measured and analyzed. The results provide insights into the radiation hardness of each SiPM model and offer guidance for their application in radiation rich environments.

Research field of your presentation

Experimental Low-energy nuclear physics

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