15th Pisa Meeting on Advanced Detectors - La Biodola, Isola d'Elba (Italy), 22-28 May 2022

Comparison of new SiPM models for applications in High-Energy physics

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Silicon Photo-Multipliers (SiPMs) are widely used as light detectors for the new generation of experiments dedicated to high energy physics. For these reasons, we tested several recent devices from different manufacturers: Hamamatsu 13360-1350; Ketek PM1125; ONsemiconductors FC10035 and AdvanSid NUV4S-P. Particular emphasis has been put on measurements of dark counts and gain, performed at different temperatures by means of a climatic chamber (F.lli Galli model Genviro-030LC) with a temperature range from −60 ◦C to +60 ◦C, housing the SiPM under test. This latter also allowed evaluating the temperature coefficient of all models.