

R&D on rad-hard SiPM by INFN groups of LHCb/RICH collaboration

Tuesday 16 May 2023 11:15 (15 minutes)

Silicon Photomultipliers (SiPMs) can be very promising devices in the field of photodetection thanks to their interesting features regarding the photoresponsivity, the efficiency, the temporal and spatial resolution and the relatively low cost. Unfortunately, up to now, the performances of these devices are very sensitive to damages caused by radiation. For this reason, the INFN groups members of the LHCb/RICH collaboration are currently working in synergy with the Italian company FBK on the development of innovative SiPMs with improved characteristics in terms of radiation damage. In this view, different rad-hard prototypes with different shapes, cell pitch and electric field will be tested and fully characterized at different conditions of operations, before and after irradiation, by the labs involved. These studies will lead to the definition of the best solution for the production of SiPM with rad-hard characteristics.

Requested length

10 minutes

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