Mu3e Pixeldetector

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The pixel detector of the Mu3e experiment will be the first large-scale detector using depleted monolithic active pixel sensor (D-MAPS) based on a commercially available HV-CMOS chip process. These chips can be thinned to 50 µm thickness leading to a drastic reduction of material. To make the exiting physics of Mu3e possible, the material per detector layer should not exceed 0.1% in radiation length. This imposes some challenges onto the detector design.

The Mu3e experiment is a well-known project to the Heidelberg audience. This talk will put its focus on the pixel detector and the fascinating solutions that have been developed within the Mu3e collaboration over the past years.