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Timing resolution of the LGADs pads from a common AIDA2020 run produced at CNM

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In this contribution we will show the latest results from laboratory measurements of Low-Gain Avalanche Diodes (LGADs) from a common AIDA-2020 run fabricated by CNM. These sensors come in two different thickness (50 and 35 μm) and different gain layer doping concentrations. The test setup used for this studies consist of a Sr-90 source and couples of identical sensors aligned to form a coincidence telescope. Each sensor is wire bonded to US-SC readout board which carry the first stage amplifier, while the second stage is a home made three stage amplifiers. Finally the signals are read out on a fast oscilloscope and the analysis is performed offline. In this presentation we will focus on the timing performance of the sensors, describing the test setup, the signals characteristics, the analysis procedure and the timing resolution for the different sensors. Additionally the electrical characterisation of the sensors will be discussed.

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