

Progress report on the characterization of LGAD microstrip sensors (n-in-p and p-in-p) and their readout tests using a dedicated high dynamic-range Charge-Sensitive Amplifier-Shaper front-end developed on the AMS 180nm technology.

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We will present here the most recent results from the laser and test-beam based characterization of fully functional s-LGADs (n-in-p strip LGAD) and i-LGAD (p-in-p strip LGAD) sensors. Measured current transient shapes were compared against TCAD simulations for a better understanding of the signal formation process, sensor response uniformity, signal amplification and timing features; tracking performance of a i-LGAD device was assessed at the SPS particle's beam using off-the-shelf Alibava readout electronics; finally, it will be shown a preliminary study of an assembly consisting of s-LGAD sensors read out with of dedicated analog front-end which implements a charge amplifier-shaper manufactured on the AMS 180nm technology

TRACK

UFSD, LGAD

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