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Extraction of electric field of non-irradiated microstrip detectors using the edge-TCT technique

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Edge-TCT is a transient current technique in microstrip detectors where charge carriers are injected from the side of the detector, instead of from the top or bottom. Current transients are measured as a function of depth, therefore charge collection efficiency and instant drift velocity can be profiled. Studying the collection time of the carriers as a function of depth we can extract information on the electric field and the capacitance of the detector. This information is then used as starting values for the fit of measured drift velocity, and the electric field finally computed. We present results of this method on non-irradiated Micron detectors (n-bulk, p-bulk) and MCZ n-type detectors produced by HIP.

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