

Measurement of detrapping times in irradiated silicon detectors

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The TCT was exploited in a new way for measuring de-trapping times in irradiated silicon detectors. The method is based on measurements of the collected charge as a function of integration time on time scale much longer than drift times, which required acquisition of current waveforms on the time scale of few microseconds. The analysis of the data and first results will be presented. The preliminary measurements with irradiated n-type MCz diodes revealed that de-trapping times of holes are of order few micro-seconds and much shorter than those of electrons. The temperature dependence of de-trapping times can be exploited for estimation of energy levels responsible for trapping.

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