Charge Collection and Trapping in Epitaxial Silicon Detectors after Neutron Irradiation

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The charge collection and the trapping behaviour of 150 μ m n-type epitaxial silicon detectors irradiated with neutron fluences between 1E15 and 4E15 cm-2 were investigated. Observed double peaks in the TCT signal could be simulated assuming parabolic electric fields. Contrary to previous assumptions of field independent trapping time constants the field dependence was studied. The experimental results and simulations will be presented and discussed

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