

# Charge collection and trapping effects in n-type and p-type epitaxial silicon diodes after proton irradiation

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Epitaxial silicon pad diodes of p-type (150  $\mu\text{m}$ , ST material) and n-type (75  $\mu\text{m}$ , 100  $\mu\text{m}$ , 150  $\mu\text{m}$ , both ST and DO) material have been investigated after 24 GeV/c proton irradiation at CERN PS. Time-resolved TCT measurements with 670 nm laser light (front injection) were performed for 150  $\mu\text{m}$  thick diodes and thus the effective trapping time constants for electrons (n-type) and holes (p-type) could be obtained. CCE measurements with 5.8 MeV alpha particles and 670 nm and 1060 nm laser light showed an anomalously high charge collection.

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