

# 42nd RD50 Workshop on Radiation Hard Semiconductor Devices for Very High Luminosity Colliders (Montenegro)

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## Irradiation effect on trapping time of silicon carbide detector

*Tuesday 20 June 2023 12:00 (20 minutes)*

Top-TCT is carried out on non-irradiated and irradiated SiC detectors to study the charge collection, from which the trapping time can be estimated. Electrical characteristic with irradiation up to  $7.8 \times 10^{14} \text{ neq/cm}^2$  has been studied and predicted. Thus, simulation of carriers in RASER has been optimized based on the contribution from trapping time. The electric read-out in RASER is proceed by NGSpice, resulting in good agreement.

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