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TCT, eTCT and I-DLTS measurement setups at the CERN SSD Lab

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Setups based on the transient current technique using pulsed LASERs with 660nm and 1064nm wavelength were built at the CERN SSD Lab.

Microsecond LASER pulses are used in the I-DLTS setup to investigate charge carrier detrapping on irradiated silicon sensors. First measurement results from a set of proton irradiated silicon diodes exposed to red laser pulses of 1us to 5us are presented.

A new TCT+ setup based on the former TCT setup combines all features of a conventional red and IR TCT measurement with an edge-TCT setup. A temperature controlled Peltier cooling system allows measurements above -20C with a variation of +-0.4C. A summary of measurements performed with irradiated and unirradiated samples illustrates the current state of the system.

Primary author: GALLRAPP, Christian (CERN)

Co-authors: NEUGEBAUER, Hannes (Hamburg University (DE)); FERNANDEZ GARCIA, Marcos (Universidad de Cantabria (ES)); MOLL, Michael (CERN)

Presenter: GALLRAPP, Christian (CERN)

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