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Edge-TCT studies of non-irradiated HVCMOS sensors

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A HVCMOS sensor (HVCMOS2FEI4) was investigated before the irradiation with Edge-TCT. Key properties of the charge collection in p substrate were determined by different analysis methods. Good agreement between the measured and given substrate resistivity was found. The measurements revealed that the major contribution to the measured charge comes from the movement of carriers by diffusion and only a fraction from the drift. The drift component increases with applied bias voltage and reaches around 30% at 60V. Charge collection measurements from Edge-TCT were also compared to 90Sr measurements.

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