

## New results of edge-on measurements with electron beam on pad diodes

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The previously introduced technique of edge-on measurement using an electron beam for pad diodes has been studied further. The method has been improved in several aspects: the spatial resolution (by a factor of 2), the precision of the in-situ alignment (by a factor of 2.5), and the statistical errors (by a factor of 2.0).

In this study, the pad diodes have areas of 25 mm<sup>2</sup> and 12.5 mm<sup>2</sup>, a thickness

of 150 μm and a p-doping concentration of  $4 \times 10^{12} \text{ cm}^{-3}$

. For irradiation

study, four diodes were irradiated with 23 MeV protons up to a 1 MeV neutron equivalent fluence of  $\Phi_{\text{eq}} = 1.2 \times 10^{16} \text{ cm}^{-2}$

. The measurements were performed

at -20 °C for bias voltages up to 800 V. In addition, a non-irradiated diode was measured for bias voltages in the range of 10 to 120 V.

This work presents the new results. Using these results, one can develop

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