

Investigation of the Electrical Characteristics of Double-Sided 3D Sensors after Proton and Neutron Irradiation up to HL-LHC Fluencies

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This report addresses the experimental characterization of Double-Sided 3D radiation sensors, fabricated at FBK, irradiated with protons and neutrons up to fluencies in the order of 10^{16} n_{eq}/cm^2 as the foreseen HL-LHC compliance. The study is mainly aimed at comparing different designs and technological solutions in terms of full depletion voltage and breakdown voltage in order to predict the possibility to bias these sensor at the most suitable voltage after several years of operation at the HL-LHC.

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