Initial acceptor removal in p-type silicon detectors

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Initial acceptor removal in p-type silicon detectors was studied for different samples after reactor neutron and 24 GeV proton irradiations. Although at HL-LHC fluences the initial acceptor removal is not important for standard detectors, it may play an important role in changing the properties of the multiplication layer of LGAD devices and consequent reduction of gain. A set of simple pad detectors with different resistivities was irradiated and parameters of acceptor removal studied.

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