The Deep Junction LGAD: Concept and Progess

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Achieving granularity below the 1 mm scale while maintaining high efficiency, precise timing, and good spatial resolution is a goal of continued R&D on silicon diode Low Gain Avalanche Detectors (LGAD). The deep junction LGAD (DJ-LGAD) approach, proposed by the SCIPP ultrafast sensor R&D group, is to make use of the diode junction to create avalanche-generating fields within the sensor, and then to bury the junction underneath several microns of n+ material to keep surface fields low, and allow for conventional pixelization techniques. In this talk, we will present updates relating to the DJ-LGAD design and fabrication.

In-person or Virtual?

In-person

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