Contribution ID: 16 Type: not specified

Measurements on segmented LGAD devices

Thursday 20 November 2014 15:10 (20 minutes)

The Low Gain Avalanche Detector (LGAD) is one of the technologies currently under development for radiation hard trackers.

The concept is to generate a high electric field region inside the semiconductor material. Charge carriers crossing this region may acquire high enough energy to generate secondary ionization initializing a multiplication cascade and enhancing the charge collected on the electrodes.

So far the LGAD technology has been studied on diodes. Recently a production run including segmented devices has been produced by CNM.

We analysed strips and pixel detectors from wafer 12 and 14 of run 6827 (i.e. $285 \mu m$ thick float zone with shallow and deep implantation of the n+ cathode, respectively).

The results of TCT measurements on strips to study the sensor response uniformity over the strip surface and of charge collection measurements on pixel devices after exposition to a 90-Strontium beta source will be presented and discussed.

Authors: CAVALLARO, Emanuele (Universitat Autònoma de Barcelona (ES)); LOPEZ PAZ, Ivan (Universitat Autònoma de Barcelona (ES)); LANGE, Joern (IFAE Barcelona); GRINSTEIN, Sebastian (Universitat Autònoma de Barcelona (ES))

Presenter: CAVALLARO, Emanuele (Universitat Autònoma de Barcelona (ES))

Session Classification: LGAD