

## 28th RD50 Workshop (Torino)



Contribution ID: 21

Type: **not specified**

### Status of LGAD RD50 projects at CNM

*Tuesday, 7 June 2016 16:50 (20 minutes)*

I will report the first measurements of detectors fabricated with Ga implant and the new proposal for a project to increase the radiation hardness of LGAD sensors using Carbon. In LGAD the gain decreases with irradiation, which can be attributed to effective acceptor removal in the multiplication layer. The relative decrease of measured charge is much more pronounced for LGAD than for standard devices at fluences below  $1E15$  n/cm<sup>2</sup>. The reason must therefore be related to the decrease of the multiplication gain rather than trapping of the drifting charge. The gain decrease can be attributed to the reduction of effective doping in multiplication layer, which leads to smaller electric field strengths.

**Primary author:** Dr PELLEGRINI, giulio (Centro Nacional Microelectronica IMB-CNM-CSIC)

**Presenter:** Dr PELLEGRINI, giulio (Centro Nacional Microelectronica IMB-CNM-CSIC)

**Session Classification:** Silicon with Internal Gain III