

CNM activities on LGADs for ATLAS/CMS Timing Layers

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We will present the last technological developments at CNM on LGAD detectors for ATLAS HGTD and CMS ETL. In this sense, we will summarize the actual status of the new AIDA2020 fabrication run to integrate thin LGADs in 4-inches, 35 and 50 microns thick, silicon on silicon wafers, showing a description of the integrated structures in the mask set and a summary of the fabrication process. In addition, we will present a basic description of the new run to integrate, on 4-inches, 50 microns thick silicon on silicon wafers, LGADs with Gallium doped multiplication layer and its first electrical characterization results.

Besides, we will present the main results of the current status of the first 6-inches LGAD run electrical characterization, showing the first results of the gain values measured with a Tri-alfa source. Also, a basic description of the new run to integrate on 6-inches SOI wafers, thin LGADs for timing applications, and the mask description for a new 6-inches thin LGAD fabrication process for ATLAS/CMS, will be presented. This run will be fabricated using 35 and 50 microns thick, silicon on silicon wafers.

Primary author: Dr HIDALGO, Salvador (Centro Nacional de Microelectrónica (IMB-CNM-CSIC))

Co-authors: Mrs CARULLA, Maria del Mar (Centro Nacional de Microelectrónica (IMB-CNM-CSIC)); Mr DOBLAS, Albert (Centro Nacional de Microelectrónica (IMB-CNM-CSIC)); Dr FLORES, David (Centro Nacional de Microelectrónica (IMB-CNM-CSIC)); Dr MERLOS, Angel (Centro Nacional de Microelectrónica (IMB-CNM-CSIC)); Dr PELLEGRINI, Giulio (Centro Nacional de Microelectrónica (IMB-CNM-CSIC)); Dr QUIRION, David (Centro Nacional de Microelectrónica (IMB-CNM-CSIC))

Presenter: Dr HIDALGO, Salvador (Centro Nacional de Microelectrónica (IMB-CNM-CSIC))

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