



ID de la contribución : 66

Tipo : no especificado

Testing MPPCs for PET at UB

Medical imaging devices have historically been based on scintillator crystals coupled to photomultiplier tubes, PMTs. The problems to combine PMTs with high electromagnetic fields and the relatively high cost per unit surface, opens new opportunities on the field for a different type of photodetector named silicon photomultiplier.

SiPM or Multipixel Photon Counter, MPPCs, offer an alternative combining the high gain of the photomultiplier tubes, and the insensitiveness to the magnetic field, high quantum efficiency and compact structure of the avalanche photodiodes. This allows an increasing quality of medical imaging technics, such as positron emission tomography, allowing a better and early detection of different diseases.

In this study very promising results for coincidence time resolution and single photon time resolution coming from the silicon photomultiplier combined with a readout electronics developed at UB are presented, where we are trying to reach the limits of the technology.

Summary

Primary author(s) : Sr. SÁNCHEZ, David (Grupo EHEP, en el departamento de ECM, Facultad de Física de la Universidad de Barcelona)

Co-author(s) : Dr. GASCON, David (ICC - Universitat de Barcelona); Dr. LLOSA, Gabriela (IFIC-CSIC); Sr. BARRIO, John (PhD student); Prof. GRACIANI DIAZ, Ricardo (Universitat de Barcelona, Institute of Cosmo Sciences, ICCUB)

Presenter(s) : Sr. SÁNCHEZ, David (Grupo EHEP, en el departamento de ECM, Facultad de Física de la Universidad de Barcelona)