



Contribution ID: 15

Type: **not specified**

Development of a modular DAQ to characterize the RD50 depleted monolithic active pixel sensors

Friday 14 June 2019 10:00 (20 minutes)

This contribution will describe the last developments carried out and the ones foreseen for the characterization of the RD50 MPW1 and RD50 MPW2 depleted monolithic pixel sensors implemented in the LFoundry 150 nm technology in the framework of the RD50 collaboration. A modular and scalable DAQ system is being developed for this purpose and for other possible applications in the future (characterization of other radiation detectors, accelerator instrumentation, medical physics, etc.). It is based on function specific FPGA Mezzanine Card (FMC) modules which can be connected to a platform board with a System-on-Chip (SoC), volatile and non-volatile memories, two FMC connectors and Gigabit Ethernet communication capability. Several platform boards will be able to be connected for test beam measurements and to scale up the DAQ. Specific custom boards have been already designed to accommodate the RD50 MPW1 and RD50 MPW2 devices and to connect these devices to the corresponding FMC interface module. Two different FMC modules are being designed, one for triggering and communication purposes, and another to interface the devices under test.

Author: RICARDO, Marco-Hernández

Co-authors: THOMAS, Bergauer; CHRISTIAN, Imler; SALVADOR, Martí-García; SAM, Powell; HELMUT, Steininger; EVA, Vilella

Presenter: Dr MARCO HERNANDEZ, Ricardo (CERN)

Session Classification: CMOS Sensors