

HV CMOS Technology

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High-voltage CMOS detector technology relies on the use of HVCMOS processes for the design of monolithic pixel sensors.

The HVCMOS detectors have several good properties: a fast charge collection by drift, a high radiation tolerance, CMOS in-pixel electronics, the compatibility with commercial processes and the possibility to produce thin detectors. The sensor element is a deep-n-well diode in a p-type substrate.

HVCMOS detectors are the main technology option for the tracking detector of Mu3e experiment at PSI and the luminosity monitor of PANDA detector at GSI.

We are also exploring a HV-CMOS detector as a replacement for the traditional pixel- and strip sensors at ATLAS.

In this talk, we will present the status of our development and possible improvements.

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