

NuFact 2021: The 22nd International Workshop on Neutrinos from Accelerators

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HV-MAPS

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High Voltage Monolithic Active Pixel Sensors (HV-MAPS) use a commercial CMOS process qualified for voltages up to 120 V. This allows for a fast charge collection. At the same time the read-out electronics is integrating on the chip. With a very thin active region, the sensors can be thinned to below 50 μm . This makes HV-MAPS ideally suited for tracking low momentum particles at very high rates.

A HV-MAPS based tracking detector is currently being build for the upcoming Mu3e experiment, and is (among other experiments) being considered for Atlas and LHCb detector upgrades. This talk will provide an overview of the HV-MAPS technology and upcoming applications.

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Session Classification: WG 4 + WG 6 (WG4 zoom)