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Resistive Pixelized Micromegas for Future Detectors.

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Resistive Micromegas detectors have proven, over the years, to be a reliable detector technology. This presentation will report on further improvements and developments of such detectors for robust and stable operations. The ongoing project focuses on the optimisation of the design with small readout elements, employing pads, and of the spark protection system. Optimal layouts have reached high stability and good rate capability, up to tens MHz/cm². Spatial and time resolution of the order of 100μ m and below 10ns, respectively, have been achieved and can be tuned depending on the application.

Notably, solutions with simplified layouts for medium and low rate applications, such as the muon systems of the FCC-ee detector concepts, are developed using the capacitive sharing technique. Key results will be presented, focusing in particular on recent measurements with radioactive sources and test-beam data analysis.

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