

Workshop on Advanced Radiation Detector and Instrumentation in Nuclear and Particle Physics (Online)



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Simulations of multi-layer GEM systems from single to quadruple GEMs

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We present comparative simulation results for single, double, and triple layer GEM (Gas Electron Multiplier) GPD (Gas Pixel Detector) systems, along with some preliminary quadruple layer results, using Garfield++ and ANSYS field solver. With a multi-GEM layer structure, of up to 5 layers, a very high effective gain (up to 10^6 in some gases) can be attained with each GEM layer working at an individually much lower gain thus avoiding discharge problems - this is the major advantage of GEM technology. We compare our results with those of published experiments and simulations.

What is your experiment?

GEM

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