

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



Contribution ID: 71

Type: Talk

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

*Monday 25 October 2021 12:20 (20 minutes)*

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

**Primary author:** JUNG, Ae Ra (Peking University (CN))

**Co-authors:** Prof. BAN, Yong (school of physics, Peking University, China); Prof. WANG, Dayong (school of physics, Peking University, China); Ms WANG, Yue (school of physics, Peking University, China); Mr LICHENG, Zhang (school of physics, Peking University, China)

**Presenter:** JUNG, Ae Ra (Peking University (CN))

**Session Classification:** Oral presentations

**Track Classification:** Simulation