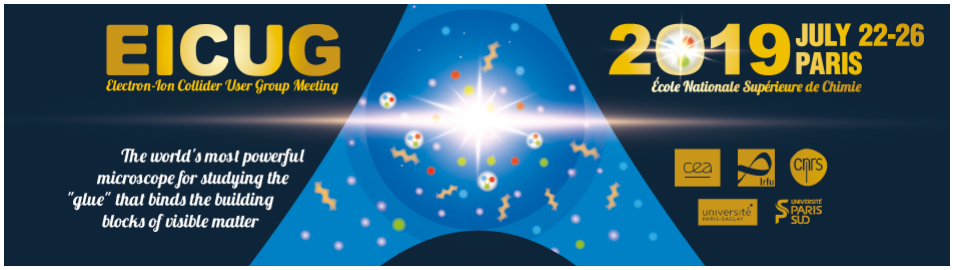

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MPGDs trackers for an EIC

jeudi 25 juillet 2019 10:12 (15 minutes)

Modern tracking gaseous detectors based on micro pattern readout, or MPGDs, are becoming the standard in high energy physics experiments. This is thanks to their great time (better than 10ns) and spatial (up to 50µm) resolutions, low energy budget (down to 0.4% of a X0), high rate capabilities (several kHz/mm2), high tolerance to radiation, and relatively low cost per area. In addition to these performances, MPGDs can be used in very different forms and shapes for different applications. For example: cylindrical Micromegas with low material budget for low momentum proton reconstruction at Jefferson Lab for the CLAS12 experiment to the very large muon tracker for the ATLAS experiment at CERN on the LHC with highly controlled geometry.

We propose to report on what we have learned from building these detectors at CEA Saclay from the COMPASS experiment to the LHC upgrade. Then, for those which have been talking physics data, we will report on the operation of these detectors in experimental condition and the performances that they have reached. Later we will present our newest advance in tracking detectors with MPGDs for an EIC.

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