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Title: Air Shower Multi-Mesh Proportional Counter

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Abstract: In this work some properties of Multi-wire proportional counters using air as the ionizing gas medium at atmospheric pressure were described. We examined the use of MWPCs in the proportional mode, where an MWPC defines a small sensitive area (2.4 cm × 2.4 cm) which can be extended by adding more wires for large area detection. We examined the track of particles passing through this area in each shower and this was obtained from the amplitude of the pulse given by the MWPC at the time of the event. This information was used to calculate the timing resolution of the detector. MWPCs were assembled into a hexagonal array and were used to record the particles present in cosmic ray air showers. The entire simulation and calculations were done using various simulation packages .

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