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【345】 Performance of Multiplexed XY Resistive Micromegas detectors in a high intensity test beam

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The use of multiplexed modules in high intensity environments was not explored so far, due to the effect of ambiguities in the reconstruction of the hit point caused by the multiplexing feature. We present the first performance results of multiplexed modules tested at the CERN SPS 100 GeV/c electron beam for intensities up to $3.3 \cdot 10^5 \text{ e}^-/\text{sec}/\text{cm}^2$. At these rates, a factor 5 multiplexing introduces more than 50 % level of ambiguity. Our results prove that by using the additional information of cluster size and integrated charge of the induced XY signal clusters the ambiguities can be reduced to a level below 2%.

Author: BANERJEE, Dipanwita (Eidgenoessische Technische Hochschule Zuerich (CH))

Presenter: BANERJEE, Dipanwita (Eidgenoessische Technische Hochschule Zuerich (CH))

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