



Contribution ID: 26

Type: **Poster**

Edge Effects in the CMS iRPC detectors

Thursday, 29 September 2022 15:46 (1 minute)

Improved Resistive Plate Chambers (iRPCs), designed using thin low resistivity High Pressure Laminate gaps, are proposed to equip the very forward region of the CMS spectrometer. They can withstand rates of a few kHz/cm^2 . New electronics equipped with excellent precision timing measurements (< 150 ps) is developed to read out the RPC detectors from both sides of the strips to allow good spatial resolution along them. The iRPC chambers have a petal shape and are organized in rings. They will occupy the innermost ring of the third and fourth station in the muon endcap. To minimize the dead zones on the edges, the iRPC chambers will be installed in a staggered way. To better understand the behavior of the transition region between the chambers a dedicated study has been performed using a small collimated ^{137}Cs radiation source and a cosmic test bench. Local space resolution and cluster size have been measured on the edges and compared to the center of the chamber. This work is showing the results from this study.

Primary author: COLLABORATION, CMS

Presenter: COLLABORATION, CMS

Session Classification: Poster session