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Data analysis to evaluate the CPPF system in CMS trigger phase I upgrade

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The CMS Level-1 trigger upgrade system consists of several layers of electronics with a large number of homogeneous cards based on the Micro-TCA(uTCA) standard. The CPPF(Concentration Pre-Processing and Fan-out)system belongs to one of the electronic layers, covering the Muon RPC Overlap and Endcap region, and provides preprocessing algorithm for track finding. It includes, in hardware, eight specially designed CPPF cards, one generic CMS card called AMC13, one commercial MCH card, and a Micro-TCA Shelf. Its functionality is realized with five firmware modules: TTC module, optical input module, optical output module, readout module, and a CORE module for cluster finding and transformation. In addition to the firmware functionality, online software is needed for controlling and monitoring each individual CPPF module and the whole CPPF system. This presentation will discuss the data analysis to evaluate the system.

Minioral

Yes

Description

Trigger

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