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Operation and Performance of the CMS Drift Tube Detector and Local Trigger System

The Drift Tube (DT) based detector is one of the components of the muon spectrometer of the CMS experiment at the LHC. It is aimed to ensure efficient muon triggering as well as perform accurate reconstruction of particle trajectory. The system has been thoroughly commissioned using cosmic rays and it has been extensively used to provide muon triggers during global data taking. Experience in operating the CMS DT detector and results coming from recently collected data will be presented, focusing both on the description of the tracking and trigger capabilities of the system.

Summary (Additional text describing your work. Can be pasted here or give an URL to a PDF document):

I' m partecipating myself to the activities of operating the CMS DT detector and studying its performances since early 2007. I'm presently working as on-call expert and collaborating with colleagues in performing activities related to the running and commissioning of the drift tubes muon systen and its local trigger. Concerning "offline" activities and performances studies, I'm one of the developers of the DT Data Quality Monitor software, the DT Local Trigger Emulator an DT Prompt Offline Analysis Tools.

My Ph.D. thesis mainly focused on the commissioning of the DT local trigger and the study of its performances with cosmic rays. My recent work concernes the development of tools to perform precise synchronization of the DT Local Trigger at LHC and on the analysis of the performances of the DT readout, especialy studying the beahivor of the latter in case of the presence of noise signals.

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