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The CMS Central Hadron Calorimeter DAQ System Upgrade

The CMS central hadron calorimeters will undergo a complete replacement of their data acquisition system electronics. The replacement is phased, with portions of the replacement starting in 2014 and continuing through LHC Long Shutdown 2 in 2018. The existing VME electronics will be replaced with a µTCA based system. New on-detector QIE electronics cards will be transmit data at 4.8 GHz to the new µHTR cards residing in µTCA crates in the CMS electronics cavern. The µTCA crates are controlled by the AMC13, which accepts system clock and trigger throttling control from the CMS global DAQ system. The AMC13 distributes the
clock to the µHTR and reads out data buffers from the µHTR into the CMS data acquisition system. The AMC 13 also provides the clock for in-crate GLIBs which in turn distribute the clock to the on-detector front end electronics. We report on the design, development status, and schedule of the DAQ system.

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