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CASTOR LHC and cosmic rays

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CASTOR, a very forward ($5.2 < \eta < 6.6$) Čerenkov-light, tungsten/quartz calorimeter was installed and commissioned at CMS (LHC) in 2009. The calorimeter, with 16-fold ϕ -segmentation, 14-fold z-segmentation (224 channels) and $10\lambda(\text{int})$, has been obtaining data since November 2009. The physics to be addressed with CASTOR include forward energy flow in pp, AA and pA, critical for the screening of EAS MC codes, as well as “exotic” topics, such as “Centauro” and “long penetrating” events, observed in VHE cosmic-ray data. The later constitute the reason for the novel design of the calorimeter. The first operational experience with CASTOR at CMS and the possibility of identifying “long penetrating” events will be presented and discussed.

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Session Classification: Recent relevant accelerator data and results

Track Classification: Accelerator data