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Development and Integration of CT-PPS Fast Simulation on CMS Software

The CT-PPS (CMS-TOTEM Precision Proton Spectrometer) project is a combined effort of the CMS and TOTEM collaborations to construct a detector with the purpose of studying central exclusive production (CEP) in proton-proton collisions. This poster describes the simulation and reconstruction code for the CT-PPS detectors implemented in CMS FastSim. The protons scattered from the collision at very low polar angles are transported along the LHC beamlines from the generated vertex to the entrance of the detectors using Hector, to define simulated hits. The CT-PPS reconstructed tracks are obtained from the hits in the tracking detectors which are calculated by Hector and accepted within an impact parameter cut, to determine the kinematical objects at the vertex. The timing hits are then added to the tracks. Also some MC physics example results are shown here.

Experimental Collaboration

CMS

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