

CMS Full Simulation Status

Tuesday 11 October 2016 14:00 (15 minutes)

We report current status of the CMS full simulation. For run-II CMS is using Geant4 10.0p02 built in sequential mode. About 8 billion events are produced in 2015. In 2016 any extra production will be done using the same production version. For the development Geant4 10.0p03 with CMS private patches built in multi-threaded mode were established. We plan to use newest Geant4 10.2 for 2017 production. In this work we will present CPU and memory performance of CMS full simulation for various configurations and Geant4 versions, will also discuss technical aspects of the migration to Geant4 10.2. CMS plan to install a new pixel detector for 2017. This allows to perform a revision of the geometry of other sub-detectors and add necessary fixes. For 2016 the digitization of CMS is capable to work in the multi-threaded mode. For simulation of pile up events a method of premixing of QCD events in one file has been established. Performance of CMS digitization will be also discussed in this report.

Tertiary Keyword (Optional)

Simulation

Secondary Keyword (Optional)

Data processing workflows and frameworks/pipelines

Primary Keyword (Mandatory)

Simulation

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Session Classification: Track 2: Offline Computing

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