

Status of the simulation software in CEPCSW

Simulation software is a vital part for the optimization of detector design and performance studies of reconstruction and analysis. The simulation software in CEPCSW consists of physics generators, detector simulation, and electronics simulation. These components have been implemented as algorithms in the Gaudi framework, while they also integrated with the components from Key4hep, such as DD4hep and EDM4hep. This simulation software has been used in the studies on drift chamber and ECAL.

In order to better support the new computing technologies, such as concurrency and machine learning, the simulation software is expected to be extended. This is also required by the other experiments, such as FCC and ILC. To avoid the duplication of work, Gaussino simulation framework from LHCb experiment will be reused in Key4hep projects. Therefore, developing a Gaussino based simulation software for CEPC is proposed. In this contribution, how to integrate the Gaussino framework into CEPCSW will be presented. Also, an example based on the pixel detectors will be shown.

Primary author: LIN, Tao (高能所)

Presenter: LIN, Tao (高能所)

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