

Testing and verification of the LHCb Simulation

Thursday 12 July 2018 12:15 (15 minutes)

Monte-Carlo simulation is a fundamental tool for high-energy physics experiments, from the design phase to data analysis. In recent years its relevance has increased due to the ever growing measurements precision. Accuracy and reliability are essential features in simulation and particularly important in the current phase of the LHCb experiment, where physics analysis and preparation for data taking with the upgraded detector need to be performed at the same time.

In this talks we will give an overview of the full chain of tests and procedures implemented for the LHCb Simulation software stack to ensure the quality of its results. The tests comprise simple checks to validate new software contributions in a nightlies system as well as more elaborate checks probing simple physics and software quantities for performance and regression verifications. Commissioning of new major version of the simulation software for production implies also checking effects on few physics analysis. A new system for Simulation Data Quality (SimDQ) that is being put in place to help in the first phase of commissioning and for fast verification of all samples produced will also be discussed.

Primary authors: POPOV, Dmitry (Max-Planck-Gesellschaft (DE)); SZYMANSKI, Maciej Pawel (University of Chinese Academy of Sciences (CN)); FARLEY, Nathanael (University of Birmingham (GB)); BARANOV, Aleksandr (Joint Institute for Nuclear Research (RU)); CORTI, Gloria (CERN)

Presenter: POPOV, Dmitry (Max-Planck-Gesellschaft (DE))

Session Classification: T2 - Offline computing

Track Classification: Track 2 –Offline computing