



Contribution ID: 78

Type: **not specified**

The Fast Simulation Chain in the ATLAS experiment

Wednesday, 23 March 2022 14:15 (15 minutes)

The ATLAS experiment at the large hadron collider relies on very large samples of simulated events that are required in the majority of physics analysis and performance studies in the ATLAS physics program. Producing such a huge number of simulated events using the Geant4 framework consumes the CPU resources. The challenge is that in the high luminosity phase of LHC, the average number of proton-proton collisions per bunch crossing will increase to about 200 collisions, which will have a severe impact on ATLAS computing resources. To meet the simulated sample statistics requirements, ATLAS is developing faster alternatives to the algorithms used in the standard sample production chain. This document describes the new tools for fast simulation chain that have been developed by ATLAS, and shows their physics performance.

Primary author: Mr AITBENCHIKH, Brahim (Universite Hassan II, Ain Chock (MA))

Presenter: Mr AITBENCHIKH, Brahim (Universite Hassan II, Ain Chock (MA))

Session Classification: Parallel Session VI, Instrumentation