October 19 - 25, 2024

CHEP 2024

Contribution ID: **557**

Type: **Talk**

The State of Event Generators for the HL-LHC

Thursday 24 October 2024 09:30 (30 minutes)

High-Luminosity LHC will provide an unprecedented amount of experimental data. The improvement in experimental precision needs to be matched with an increase of accuracy in the theoretical predictions, stressing our compute capability.

In this talk, I will focus on the current and future precision needed by LHC experiments and how those needs are supplied by Event Generators. I will focus on how computationally intensive these computations are. And finally, describe the various software development efforts underway (or in progress) to tackle such challenges, both in the direction of AI development and better usage of GPUs.

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Session Classification: Plenary session

Track Classification: Plenary