Contribution ID: **19** Type: **Methods & tools**

Long-lived particles with Delphes and MadAnalysis 5

Wednesday 16 May 2018 12:00 (20 minutes)

The Delphes package offers a generic simulation of a detector in high energy physics. The simulation process consists in a mixture between parametric and algorithmic simulations and provides a good comprise between the transfer function method and a full detector simulation. In this talk, we will show the last Delphes performance results and explain step-by-step how LLPs are processed in the Delphes work-flow. We will focus on the LLP experimental signatures reproducible by this kind of simulation and explain the difficulties met for the very exotic signatures.
The recasting of LLP searches with the MadAnalysis 5 framework uses a special tune of Delphes which adds new features to the original package. The content of the tune and a concrete recast example will be also covered in this talk.

Presentation

Talk given in person

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