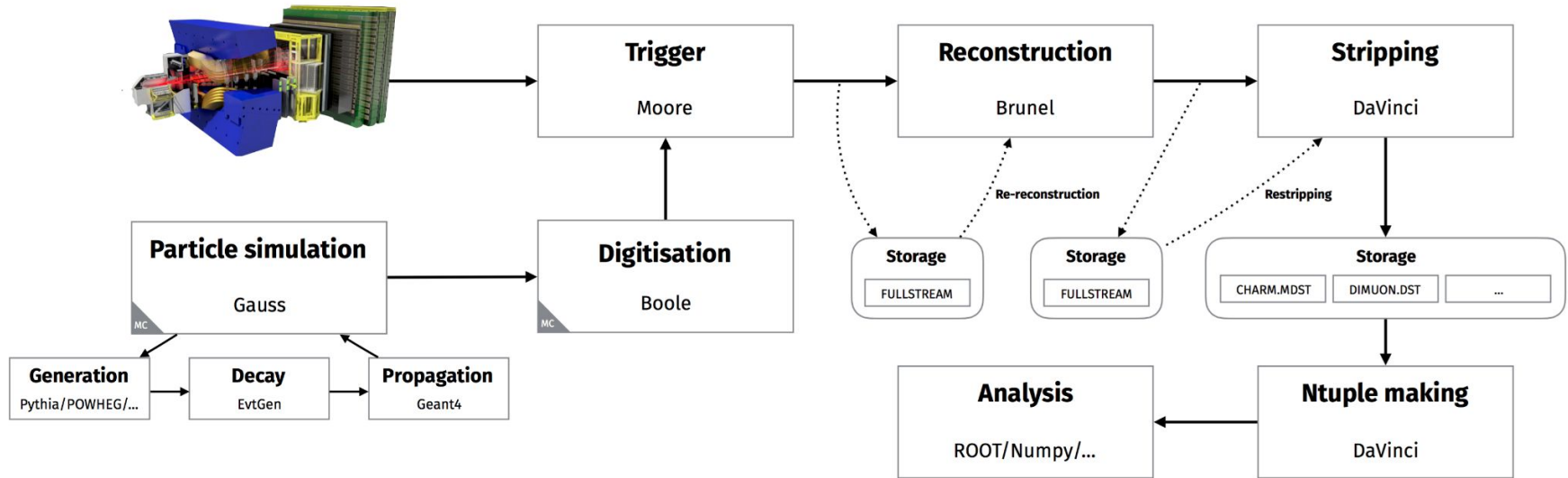# Development of simulation workflows for BSM LLPs at LHCb.

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LHCb data flow

The next combination is used for simulation and further analysis

Gauss → Boole → (Moore) → DaVinci

Gauss

The LHCb simulation framework that generates primary events and simulates the interaction with the detector by interfacing to different external applications.

Boole

Software which makes simulated hits in the virtual detector and converts them to signals that mimic the real detector. The output of Boole is designed to closely match the output of the real detector.
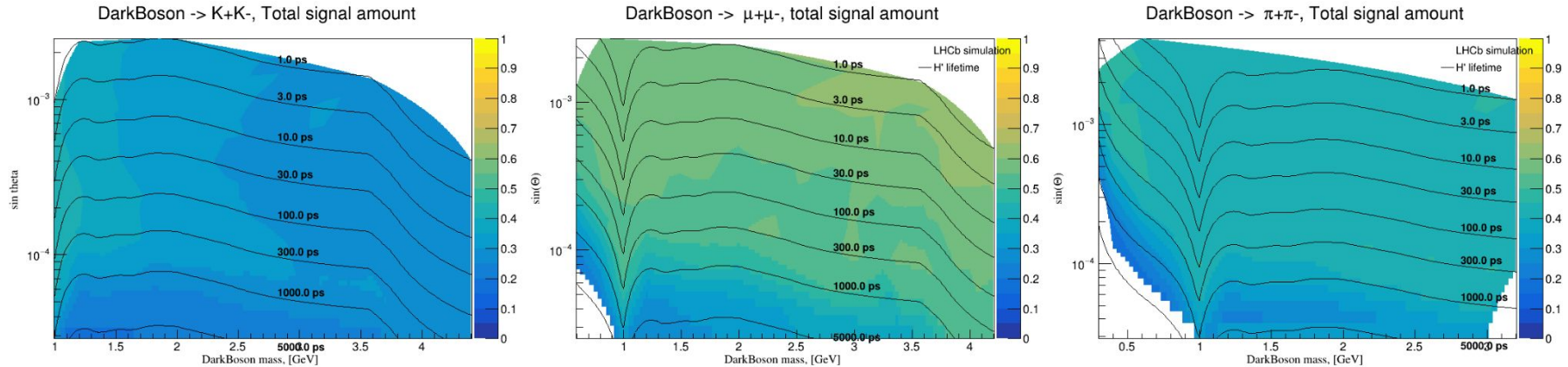
DaVinci

It is the analysis framework which supports selection of events proceeding from the further processing of data. It provides tools of general utilities for the manipulation and analysis.

Project goal

- Development of a flexible and fast framework that can be used to generate different models with different properties. Model parameters have to be modifiable.

- Selection and optimization of the output, development of a "finder" algorithm for new physics.

- Study of the simulation output inside the Allen (HLT1) framework.

Example of usage: Dedicated MC simulation of BSM physics at LHCb

For each plot near 150 simulation with further analysis (Gauss → Boole → DaVinci) was done. Process automatization will make this work much easier.

Thanks for attention!