

Fast parallel Primary Vertex reconstruction for the LHCb Upgrade

Connecting The Dots 2020

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Discussion session



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on behalf of the LHCb-RTA project

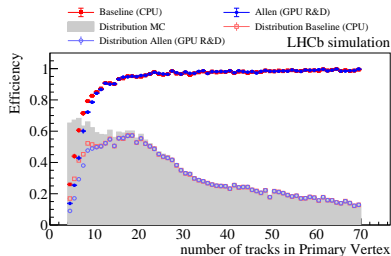
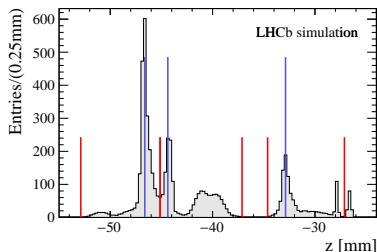
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Summary

A new algorithm for PV reconstruction for LHCb Run3 was developed:

- based on histogramming along beam-axis
 - ▶ taking uncertainties into account using Gaussian densities
- implemented on CPU and GPU architectures
 - ▶ taking advantage of various parallelization opportunities



- meets the throughput and performance requirements
⇒ chosen to be the nominal approach