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A fully modular framework for detector simulations in ROOT

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To study the performance of the Micro Vertex Detector (MVD), a fully modularized framework has been developed. The main goals of this framework have been: easy adaptability to new sensor specifications or changes in the geometry. This should be provided and additional high constrains on performance and memory usage had been set.
To achieve these goals a framework has been build which decouples the functional model of the detector from the geometry model. This allows to adapt the framework for any given functional model and geometry without any needs for changes in the software.
The active material of the detector is used as the smallest building block of this framework. The framework allows for a change in geometry and functional model without any needs to adapt the software.
The framework will be presented on the example of the MVD in the Cbm-Root-Software and an overview about the performance will be given. Also possibilities for the usage of multi threading will be shown.

Author: SITZMANN, Philipp

Presenter: SITZMANN, Philipp

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