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Integration of DD4hep in the Linear Collider Software Framework

The DD4hep detector description toolkit offers a flexible and easy to use solution for the consistent and complete description of particle physics detectors in one single system. It provides software components addressing visualisation, simulation, reconstruction and analysis of high energy physics data.
The Linear Collider community has adopted DD4hep early on in the development phase and actively participated in the design of the toolkit. The CLICdp and ILD detector working groups have reimplemented their simulation models in DD4hep, thereby ensuring a well defined hierarchy of the model, an accurate material description and a flexible scaling behaviour for the purpose of detector optimisation.
In parallel, an interface for reconstruction offering a high level view on the detector geometry has been developed.
It is based on surfaces assigned to detector components, which provide access to all relevant material properties and allow for fast and efficient navigation during track and calorimeter reconstruction.
In this talk we give a brief introduction to DD4hep, then focus on the description of the new simulation models and the reconstruction interface and its application to track reconstruction and particle flow at the ILC and CLIC.

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