

### Optimisation studies for the CLIC vertex-detector geometry

A new detector concept is currently under development for the proposed multi-TeV linear e<sup>+</sup>e<sup>-</sup> Compact Linear Collider (CLIC). The impact of the detector geometry on the physics performance of the CLIC vertex detector is being investigated. Different options for the barrel detector and alternative layouts of the endcap regions fulfilling engineering requirements while minimizing the material budget are considered. This study is based on a full detector simulation using Geant4. The beauty and charm tagging performances for different jet energies and polar angles are the key observables used to compare the different investigated detector configurations.