

Contribution ID: 36

Type: not specified

# Fine-grained calorimeters for experiments at CLIC and FCC-ee

*Tuesday 22 May 2018 16:10 (20 minutes)*

We present optimisation studies for detectors being designed for future e+e- colliders such as CLIC and FCC-ee, using particle-flow calorimetry. Surrounding a large silicon tracker volume, a very fine-grained ECAL is envisaged, with 40 Si-W layers and a lateral segmentation of 5x5 mm<sup>2</sup>. Beyond the ECAL, a steel-scintillator HCAL is placed, with 60 layers (for CLIC) or 44 layers (for FCC-ee) and scintillator tiles, coupled to SiPMs, with lateral dimensions of 30x30 mm<sup>2</sup>. The newly developed software chain based on the DD4Hep detector description toolkit is used for the studies, together with the PANDORA particle flow algorithms. Results obtained for photon and jet energy resolution as well as particle identification efficiencies for the two detector models at CLIC and FCC-ee are presented in this talk.

## Secondary topics

Simulation and algorithms

## Applications

Design concepts for future calorimeter at the energy frontier

## Primary topic

Particle Flow

**Primary author:** VIAZLO, Oleksandr (CERN)**Presenter:** VIAZLO, Oleksandr (CERN)**Session Classification:** Session 8