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OLD CLIC Detector Calorimeter Calibration

This TWiki aims to document the calibration and optimization studies for the CLIC detector calorimeters, specifically the HCal, performed in 2014-2015. In order to allow direct comparison with the ILD-based studies at Cambridge, a modified version of the ILD_o1_v06 detector is realized in Mokka was used.

Model under investigation

To realize the new CLIC detector geometry we use modified version the ILD_01_v06 Mokka driver, adapted for our requirements. In this way, there we ensure compatibility with the reconstruction framework and maintain the ability to cross-check with the studies performed at Cambridge.

```
/Mokka/init/detectorModel ILD_o1_v06
/Mokka/init/EditGeometry/rmSubDetector SServices00 #Resizing doesn't work otherwise
/Mokka/init/globalModelParameter Hcal_radiator_material TungstenDens24 #Need this material in the
/Mokka/init/globalModelParameter Field_nominal_value 4.5
/Mokka/init/globalModelParameter TPC_outer_radius 1500
/Mokka/init/globalModelParameter Hcal_nlayers 75
/Mokka/init/globalModelParameter Hcal_endcap_nlayers 60
/Mokka/init/globalModelParameter Hcal_radiator_thickness 10
/Mokka/init/globalModelParameter Coil_Yoke_lateral_clearance 518 #Needed to move Yoke plug to acc
```

MIP Calibration

A helpful talk by A. Lucaci-Timoce: <https://indico.cern.ch/event/295004/contribution/0/material/0/0.pdf> In the above talk it is mentioned that simply making the Energy per hit plot (and determining the calibration from the max) is not right, but instead one should perform a scan of the calibration factor so as to obtain a maximum at E=1 MIP. We use the "wrong" approach for now.

This topic: CLIC > ClicDetectorCaloCalibration

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