

AHCAL software status

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AHCAL software

- The AHCAL software has major update and full implementation by Angela/Beni/Nils/Alex ..., and runs smoothly.
- Most update of AHCAL has been done recently by the experts for the W-AHCAL test beam from both CERN and DESY group.
- Few update also done for Fe-AHCAL test beam

Reconstruction

- W-AHCAL test beam at CERN 2010
 - conditions database have been built
 - reconstruction has been updated
- Update on AHCAL pedestal processor
 - Using configuration information
- Update on AHCAL alignment database
 - Available for run 330xxx 331xxx

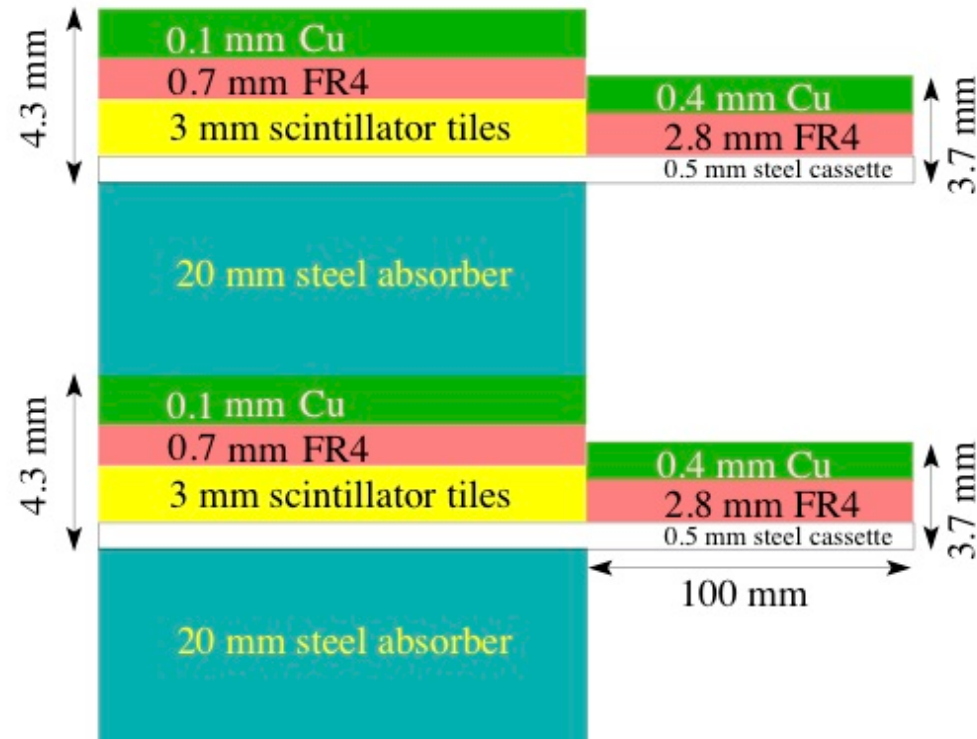
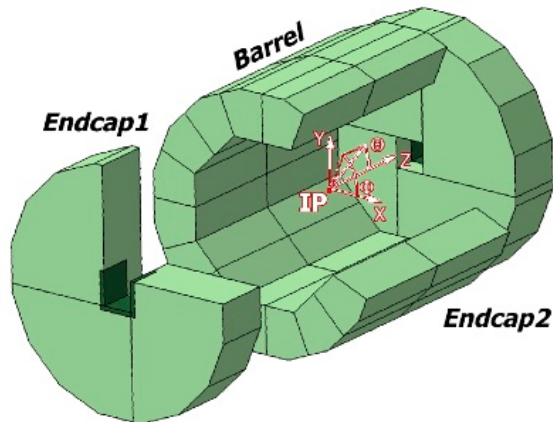
Simulation

- Tested and debugged Mokka models for the Fe-AHCAL test beam (2006 - 2009)
- A lots of comparison have been done and can be seen in the analysis notes
- Validate GEANT4 models with test beam data
 - The GEANT4 models used by the ILD HCAL
- New W-AHCAL test beam Mokka model was created too
- AHCAL digitization runs smoothly

Simulation

- Overlay test beam data, to simulate the neutral hadron particles, and realistic test of the PFA on test beam from Oleg (CAN-024)
- Detailed investigations of the pion shower properties and compared with GEANT4 based Monte Carlo by Alex (CAN-026)
- Simulation also help us to check our algorithm
 - For example to understand the track finder

HCAL simulation in ILD



- The structure for AHCAL electronics and services
- The geometry of HCAL in ILD was modeled in detail inside Mokka

Outlook

- Combine Fe-AHCAL and W-AHCAL test beam
- Improve the understand of AHCAL
- To check and improve the software of reconstruction, Monte Carlo and digitization
- To check the 'expert' tools good enough for 'service' tasks, and improve the tools for MIP, IC, Gain, Pedestal, Temperature