

Minutes of the Fifth SiD Optimization meeting

August 20th, 2014

Present:

Tim Barklow (TB)
Da An (Chi Chi) (CC)
Marcel Demarteau (MD)
Martin Gaughran (MG)
Joel Goldstein (JG)
Norman Graf (NG)
Tom Markiewicz (TM)
Nikiforos Nikiforou (NN)
Oliver Reardon-Smith (ORS)
Philipp Roloff (PR)
Andre Sailer (AS)
Rosa Simoniello (RS)
Marcel Stanitzki (MS)
Jan Strube (JS)

Agenda:

1. Single Particle Studies at DESY, Marcel Stanitzki
2. SLIC Status and Plans, Norman Graf

Points of discussion:

1.
 - a. Current calibration of the scintillator HCAL variants shows different response to 5 GeV, even though the ECAL is identical.
 - b. The DHCAL response to neutrons has an angular dependence. This is presumably at least partially a geometrical effect, as the calibration is done for 90 degrees and the DHCAL energy is proportional to number of hits.
 - c. The DHCAL response to neutrons exhibits tails that are not present in the scintillator response
2. New version of SLIC available in the latest ILCInstall
 - a. Uses Geant 4.10
 - b. MC Particle parentage re-written. Now maintains order from Generator.
 - c. Easier to keep track of individual particle trajectories
 - d. Contains new segmentation classes for DD4HEP

Action items:

1. Contact the CERN group about the status of the RPC digitization code and possibility to run in simulation (JS)
2. Look into possibility of a variant with digital scintillators, to cross-check sensitivity to neutrons (NG)
3. Shoot protons instead of neutrons. Look at response after removing tracks (MS)