

Minutes of the 37th SiD optimization meeting

09-Jun-2015

Present:

Marty Breidenbach (MB)

Christopher Milke (CM)

Norman Graf (NG)

Richard Kriske (RK)

Tom Markiewicz (TM)

Bruce Schumm (BS)

Anne Schütz (AS)

Jan Strube (JS)

Last week's Work Items:

- Create script that combines the three different steps for converting from ASCII to hepevt, from hepevt to stdhep, and merging a number of particles into the same event for easier processing into one script to convert from ASCII to LCIO. (AS) ← in progress
- Provide starting point in GeomConverter for implementing a cylinder rotated around the IP by the crossing angle. (NG) ← In progress
- Make an x-y plot of the hits to confirm the geometry used for all files was indeed the same. (CM) ← DONE. The segmentation is square cells, $3.5 \times 3.5 \text{ mm}^2$

Agenda and points of discussion:

There were no presentations.

1. Scintillator HCAL simulation updates
 - a. Update with Oskar Hartbrich (DESY) He sent plots comparing CALICE data with simulation. The contribution from what is allegedly a delta electron leading to a bump at $2 \times \text{MPV}$ is not visible in data or in simulation after digi.
2. Impact of MAPS on physics
 - a. Momentum resolution with MAPS is presumably worse than with strips. Impact should be most pronounced in recoil mass measurement at 250 GeV. Quantifying the impact is going to be a bit of work. Brief discussion on how to use the ILD analysis as a crutch, but more work needed.

New Work Items:

- Re-make the MIP response plots in units of MIPs to compare with DESY plots. Poisson statistics of how many SiPM pixels fire might still have to be implemented. (JS)