

Minutes of the 53rd SiD optimization meeting

2-Dec-2015

Present:

Marty Breidenbach (MB)
Joel Goldstein (JG)
Tom Markiewicz (TM)
Christopher Milke (CM)
Chris Potter (CP)
Dan Protopopescu (DP)
Bruce Schumm (BS)
Anne Schütz (AS)
Marcel Stanitzki (MS)
Jan Strube (JS)

Previous Work Items:

- Digest Glen's note from 2005 and references therein and map out plan for studies of beam cal layout (BS) ← DONE
- Put instructions for installing the latest version of the software and how to get the new SiD prototype model in DD4HEP on confluence (JS) ← DONE
<https://wikis.bris.ac.uk/display/sid/How+to+install+the+latest+ILCSoft+release+from+source>

Agenda and points of discussion:

1. Round Table

Glasgow: New member in the optimization group: Dan Protopopescu. Working in clicdp on the ECAL. Offered to help us with the DD4HEP migration. Confirmed that he can read the code and will start looking at the existing geometry first.

Welcome Dan!

Oregon: CP decided not to perform a direct comparison between DELPHES output and full simulation. Instead, will directly reproduce DBD performance plots. Results to go on confluence.

2. Beam Cal design for study of beam parameters

UCSC reviewed literature regarding using the beam cal for measuring beam parameters. The current plan is for Luc to study how well different beam parameters can be measured in the beam cal. The question for how well one can infer the beam parameters from these measurements is left for a separate study.

3. UCSC Studies

Recap of the results from LCWS: Main point of discussion: Vtx occupancy in either

scenario well below target of ~1%. This target will need to be understood better by studying pattern recognition performance in the future.

Studies of ECAL buffer depth have now all ingredients and are nearing completion

Studies whether the plug region is useful need to be backed by a physics analysis

Studies of the usefulness of the Anti-DID are nearing completion

4. DESY Studies (see slides)

Brief recap of results from LCWS

To-Do list for note

New Work Items:

- CM to re-make plots of hit distribution at face of beam cal with/without Anti-DID.
Re-make plots of ECAL occupancy to be clearer about how many hits get lost as function of buffer depth
- AS to implement updates to plots as laid out in slides