

Minutes of the 52nd SiD optimization meeting

18-Nov-2015

Present:

Marty Breidenbach (MB)
Joel Goldstein (JG)
Luc d'Hautuille (LH)
Tom Markiewicz (TM)
Christopher Milke (CM)
Chris Potter (CP)
Aidan Robson (AR)
Bruce Schumm (BS)
Anne Schütz (AS)
Jan Strube (JS)
Glen White (GW)

Agenda and points of discussion:

1. Beam Cal design for study of beam parameters
 - a. Discussion on what about the beam parameters can be learned by reconstructing the beam cal
 - i. beam scan in x and y mostly uses the BPM
 - ii. with a distorted beam, the highest luminosity may actually not be in a head-on collision, so feedback on the pair background from the beam cal will be useful
 - b. BS to take a look and digest what has been done and what should be re-done
Starting point: Glen White's proceedings from 2005
https://www.researchgate.net/publication/224628533_Reconstruction_of_IP_Beam_Parameters_at_the_ILC_from_Beamstrahlung
 - c. also google for "tauchi pair monitor"
2. LCWS Proceedings:
 - a. Two main contributions from participants of the optimization meetings:
 - i. Chris Potter on $a \rightarrow \mu\mu$. Uses fast simulation, Delphes cards. Will get interest from the phenomenology community.
 - ii. Presentations from BS, CM, AS not to write separate proceedings, but rather to continue on producing the combined note that could also be submitted as proceedings.
3. Next steps for simulation model:
 - a. Model will contain the new iron design, AHCAL and be consistent with the engineering model

b. AR, JS, Dan Protopopescu to meet and lay out detailed plan for implementation

New Work Items:

- Digest Glen's note from 2005 and references therein and map out plan for studies of beam cal layout (BS)
- Put instructions for installing the latest version of the software and how to get the new SiD prototype model in DD4HEP on confluence (JS)