

# Minutes of the 63rd SiD optimization meeting

27-Apr-2016

## Present:

Tim Barklow (TB)  
Marty Breidenbach (MB)  
Joel Goldstein (JG)  
Luc d'Hauthuille (LH)  
Richard Kriske (RK)  
Tom Markiewicz (TM)  
Ross McCoy (RM)  
Christopher Milke (CM)  
Andrew Myers (AM)  
Chris Potter (CP)  
Dan Protopopescu (DP)  
Aidan Robson (AR)  
Jan Strube (JS)

## Previous Work Items:

## Agenda and points of discussion:

- SiD Simulation Status
  - Progressing from sidloi3 towards implementing the latest engineering drawings
  - Still mostly using the default drivers.
  - Ddrec still work in progress.
- Thoughts on tracker alignment
  - DBD: 100 tracks / module needed for tracker alignment.
    - Physics running gets  $\sim 10^4$  tracks / month
    - Standard plot of hadronic cross sections at different energies suggests  $\sim 300$  times cross section at Z peak as at 250 GeV
    - This does not take into account processes like  $e\gamma \rightarrow eeZ$ , so cross section giving usable tracks at 250 GeV and higher energies is larger than the figure suggests.
  - Discussion on what kind of processes could be used to connect different parts of the detector
    - The detectors aren't very efficient for cosmics
    - Number of resonances with back-to-back topology?
    - Processes that could help with alignment of "weak modes"?
    - Small beam spot might hurt, not help

- Processes from background, like back-scatter, muons from spoilers (see <http://agenda.linearcollider.org/event/6910/session/5/contribution/23/material/slides/1.pdf>)
- Discussions continue at <https://silicondetector.slack.com/archives/low-energy-running>
- Supplementary information uploaded to agenda (TB) <https://agenda.linearcollider.org/event/7077/contribution/1/material/slides/1.pdf>

New Work Items: