

Minutes of the 65th SiD optimization meeting

11-May-2016

Present:

Joel Goldstein (JG)
Tom Markiewicz (TM)
Ross McCoy (RM)
Christopher Milke (CM)
Andrew Myers (AM)
Chris Potter (CP)
Dan Protopopescu (DP)
Aidan Robson (AR)
Bruce Schumm (BS)
Anne Schütz (AS)
Marcel Stanitzki (MS)
Jan Strube (JS)
Andy White (AW)

Previous Work Items:

Agenda and points of discussion:

- Background note progress (BS)
 - Good progress on what exactly to include in the study
 - Some details emerge that still need to be addressed, e.g. electronics noise
- Summary of ATF work (AS)
Follow-up questions
 - What is the time structure of neutrons? (Protons from material interactions might show up in the detector)
 - What is the energy distribution of these neutrons?
- Tracker calibration:
Four main questions
 - How well can a module be aligned with N tracks?
function of momentum, simple calculation, simulation?
 - How many tracks/pb as function of momentum, theta for 90, 250, 350, 500 GeV?
 - As above, but for “golden” tracks e.g. $Z \rightarrow \mu\mu$ decay
Already studied for 90, 500 GeV
 - What should we assume about cosmic efficiency? (Without frying the detectors)

New Work Items:

- Pro-forma items for background note
 - Detector description (JS)
 - Processes (TB)
- Work items for tracker calibration
 - # tracks at different collision energies (JS and TB)
 - Cosmics efficiencies, tracking efficiencies with different power pulsing modes. (MS)
 - Alignment precision with different #tracks (JG)