Minutes of the Fourth SiD Optimization meeting

Aug. 13th, 2014

Present

Da An (Chi Chi) (CC)
Tim Barklow (TB)
Konrad Elsener (KE)
Martin Gaughran (MG)
Joel Goldstein (JG)
Norman Graf (NG)
Tom Markiewicz (TM)
Oliver Reardon-Smith (ORS)
Philipp Roloff (PR)
Rosa Simoniello (RS)
Marcel Stanitzki (MSt)
Jan Strube (JS)

Agenda

1. Status Report of Software installation (MG)
2. Status Report of Tracking studies

Points of discussion

1. Installing Software
    a. The installation instructions for the software took some trial and error. CVMFS will become the default for software installations on the grid, but it's not currently useful. The available software versions don't allow to run our examples on confluence. Local installation of the software using the default Scientific Linux installation fails due to outdated and insufficient infrastructure (compilers, libraries).
    b. In case of insufficient documentation, people use Google, which might point to unmaintained pages that don't solve the problem.
2. Tracking studies
    a. Oli showed plots of the outliers of the tracking parameters. The behavior in the tails is non-Gaussian, but the source of these outliers is not clear. They might come from background hits.
    b. The pull distributions of the track parameters show non-optimal behavior. The track errors are underestimated. The current implementation using a pure helix fitter does not correctly take into account material effects.
    c. investigate Christian Grefe's Tracking validation package also used at ANL

Tentative agenda for next time

Plans for the next version of SLIC, moving to GEANT 4.10