Software Coordinators Report

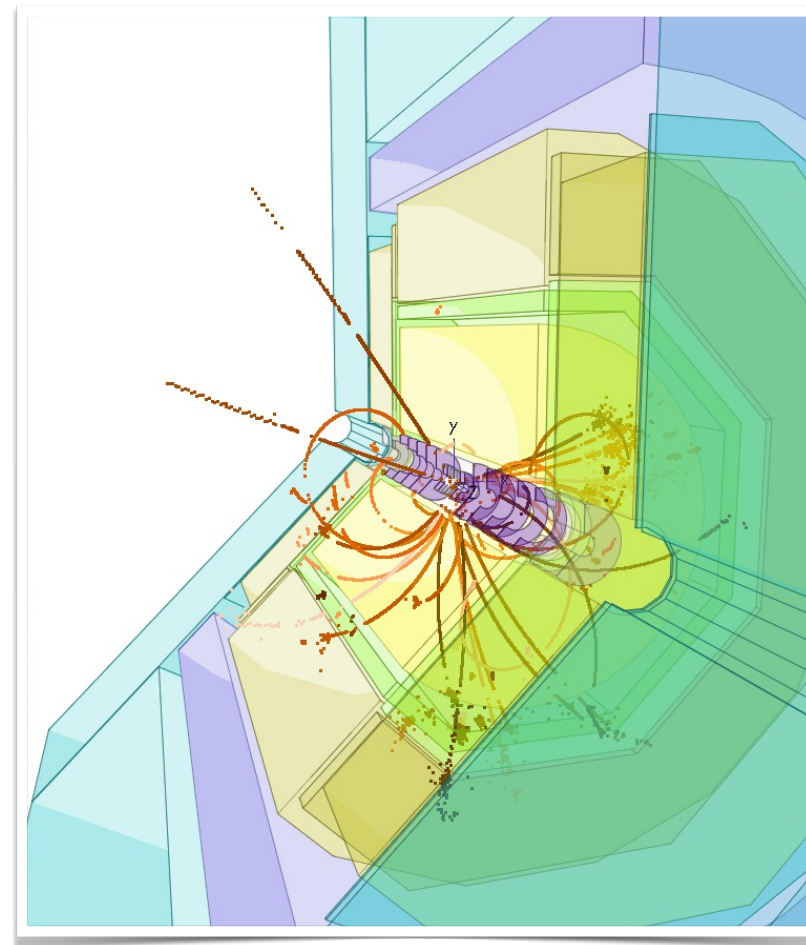**ILD Software and Analysis Meeting**

18.01.23

Frank Gaede, DESY

Outline

- Generator

- Simulation

- Reconstruction

- Monte Carlo Production

report from SW convenors meeting last Friday
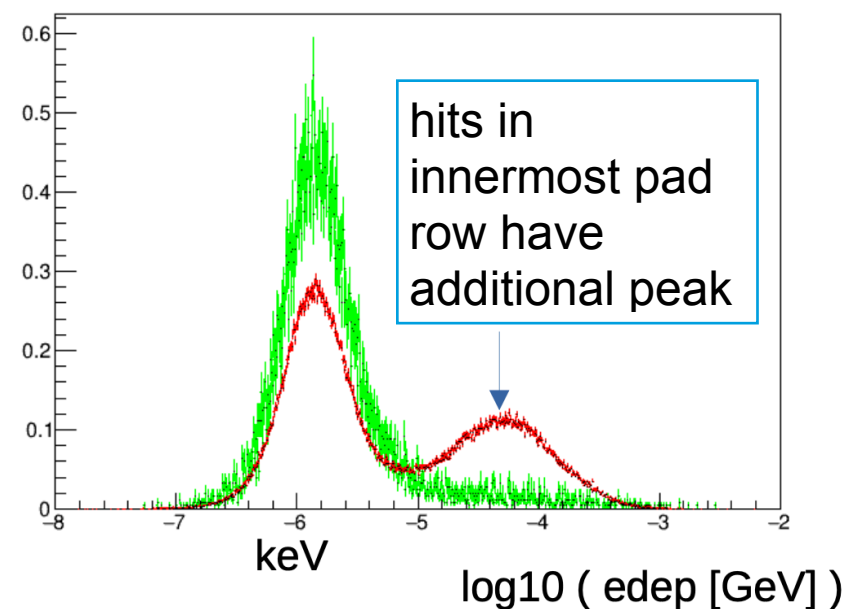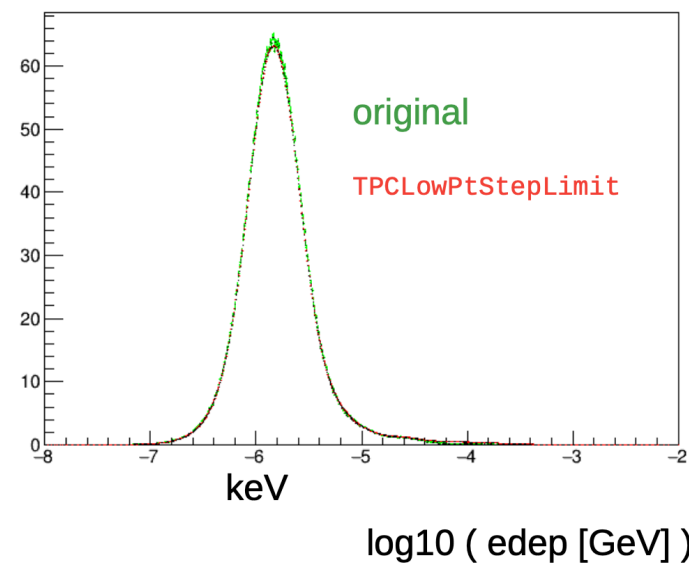
Generator

M.Berggren

- investigating cuts for virtual photon samples with 4f and e+e-

  - single Zee 4f ME samples already existing from SM production

    - need too match new low Q^2 virtual photon samples to this

- found potentially correct cuts -> validation ongoing

- will then generate remaining generator samples

  - need resource estimates on CPU and storage

- M. Bergen will report in next ILD SW&Ana samples

- reminder total of 86 channels

  - 72 w/ < 1M evts / 14 big channels: ~ 450 M evts

  - corresponding to ~1year of 250 GeV running

    - will result in event weights of ~10.0

  - roughly twice the Bhabha running (not small !)

Simulation

D.Jeans

- from TPC occupancy at circular collider studies:

- identified and fixed a bug in current TPC sensitive detector for low pt tracks

  - PR to be merged

original

TPCLowPtStepLimit

log10 (edep [GeV])

hits in innermost pad row have additional peak

log10 (edep [GeV])

Reconstruction

T.Madlener

- made Physsim package work again w/ cmake, ilcinstall, spack

  - w/ J.Tian and J.List

- updated example to be standalone cmake project

  - eventually should become a standalone package

Monte Carlo Production

H.Ono, R.Yonamine

- encountered issues w/ replicating files from DESY-SE to KEK disk

  - due to update in VOMS server certificate

  - fixed on KEK site

- replicated 5f generator samples to KEK

- working on issue w/ meta data for production system

- working on resource estimate for virtual photon sample production

Monte Carlo Production

- request from T.Suehara for Bhabhas @ 500 GeV

  - should be compatible w/ IDR samples

  - asked for v02-00-01

- SW convenors proposal: use compatible sw w/

  - /pnfs/desy.de/ilc/prod/ilc/mc-2020/ild/dst-merged/500-TDR_ws/2f_Z_hadronic/ILD_l5_o1_v02/v02-02-03/

- MB: new Whizard should make no difference for Bhabhas

  - v02-02-03 has some patches (dE/dx, TOF, … ?) that should not matter for Bhabhas ...

- discussion ongoing - need some tests …