Software Coordinators Report

ILD Software and Analysis Meeting

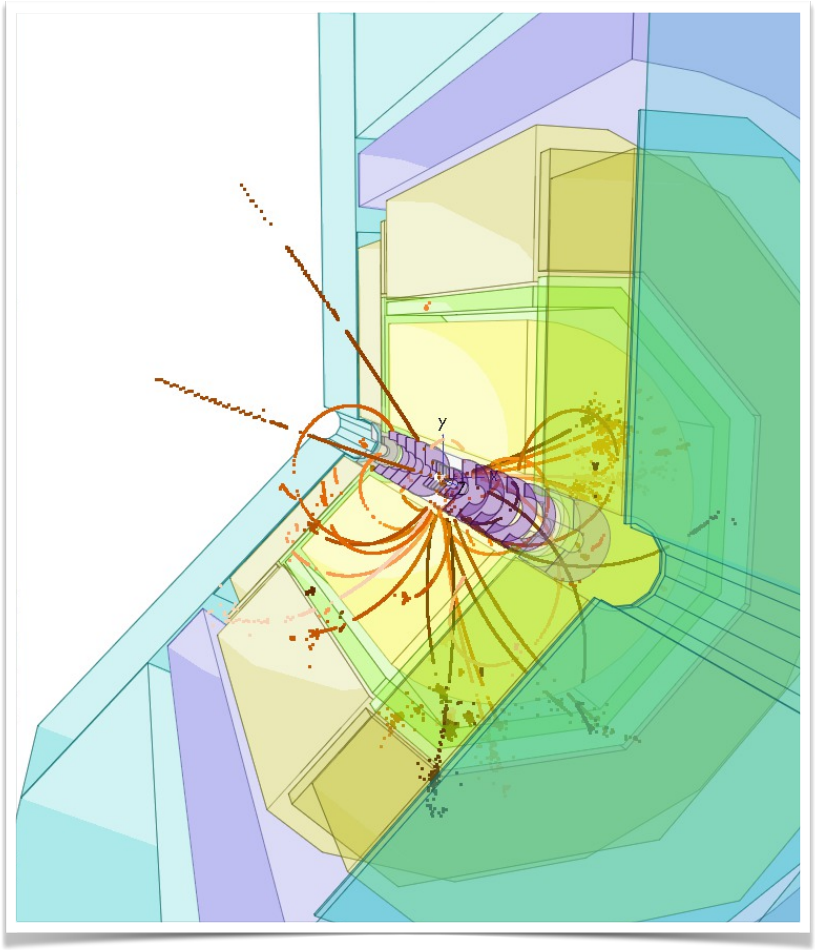
26.10.22

Frank Gaede, DESY

Outline

- Generator
- Simulation
- Reconstruction
- Monte Carlo Production

report from SW convenors meeting last Friday



Generator

M.Berggren

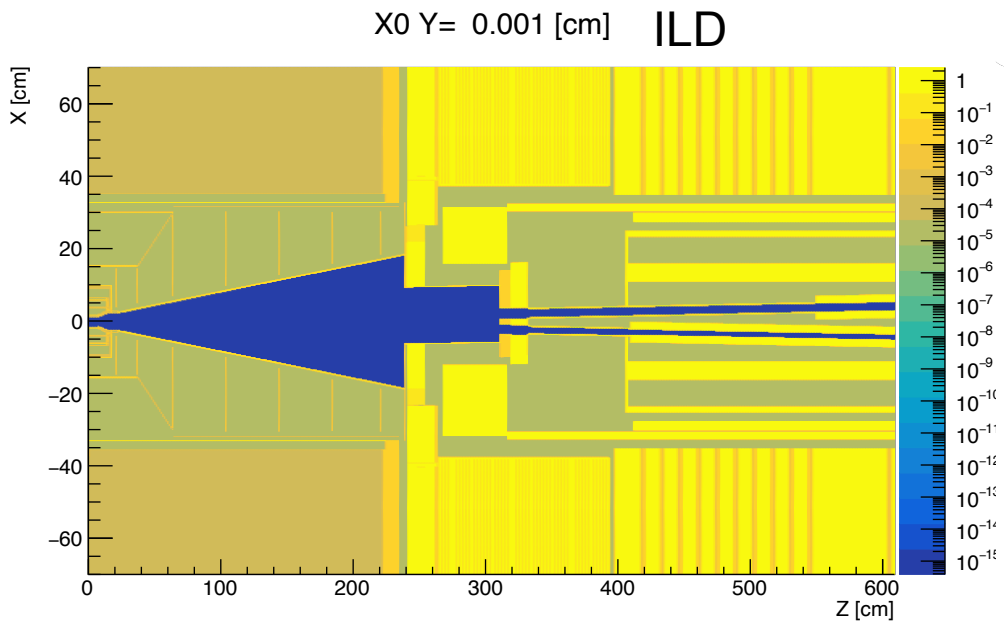
- now finished setup for generating the missing virtual photon samples (250 GeV)
  - only one remaining issue w/ one channel w/ tiny cross section ...
- total of 86 channels
  - 72 w/ < 1M evts / 14 big channels: ~ 450 M evts
  - corresponding to ~1year of 250 GeV running
    - would result in event weights of ~10.0
  - roughly twice the Bhabha running
- generator cuts such that most of these events will be visible in the detector
- next steps:
  - generate the full sample and copy to grid for production
  - then run ~5% through the full simulation and reconstruction chain for cross check of production and resource estimate

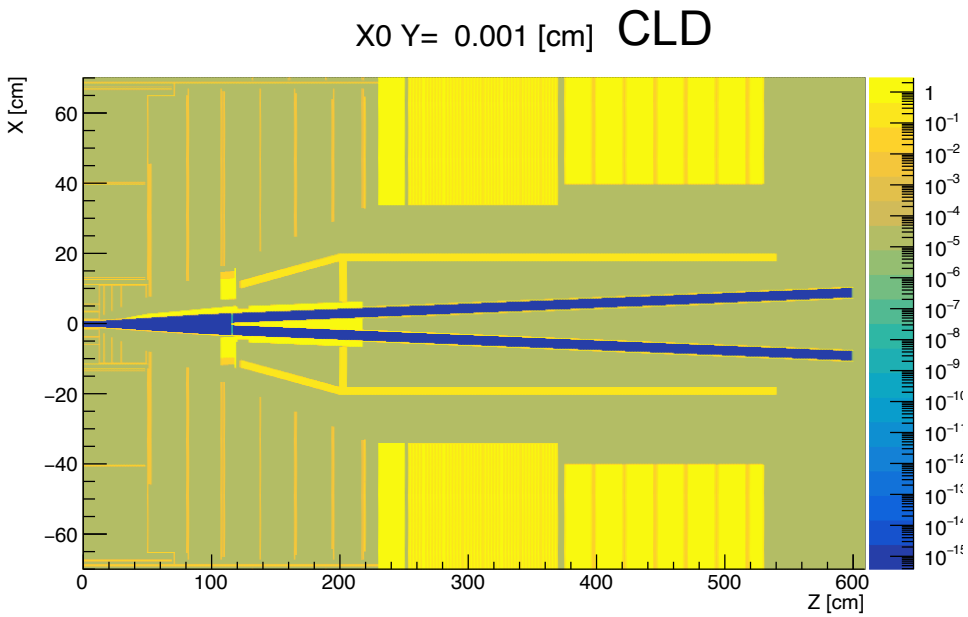
Simulation

D.Jeans

- at ILD meeting discussed to look into ILD 4 FCCee
  - started to look into existing forward region detectors/masks (from CLD) in DD4hep
  - evaluate if and how these can be applied to the ILD detector

- with K. Fujii started to look into simulating the TPC ionisation from physics events
  - need adjustments for simulation settings of TPC SimTrackerHit collections
  - correct setting for micro curlers etc…





Monte Carlo Production

H.Ono, R.Yonamine

- 2f at 500 GeV samples finished
- request from RP to replicate DST-merged to in2p3 (Lyon)
  - most files automatically copied from KEK (rather than DESY)
  - unclear why but speed not so slow...

- expect Bhabha samples expected to be finished in a few days !
  - -> MB should start generation of virtual photon samples now

- M. Bergen would like to produce some samples with ‘empty’ BXs, i.e. only gamma gamma -> hadrons and pair background
  - need to test, how this is possible
  - probably best bet is to use ee->nunu w/o ISR as basis