

Software Coordinators Report

F.Gaede

ILD SW&Ana Meeting, Nov 14, 2018

- Generator
- Simulation
- Reconstruction
- Monte Carlo Production

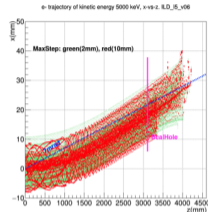
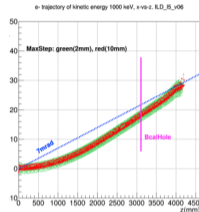
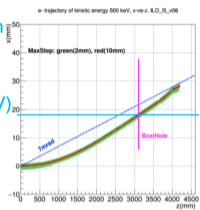
- talked to J.Reuter about a new release of Whizard
 - can be done anytime on our request
- there will be a Whizard workshop early next year
 - need to test current Whizard version
 - check if it works for 250 GeV production by then

- progress in pair-bg simulation:
 - investigating reason for killed/stopped tracks in the beam pipe:
 - particles stopped due to too many loops
 - 'cured' with smaller maxStepLength (10mm)
- did more detailed checks (see next slides)
- creation of *new pair-bg simulation* files **ongoing**

NB: this is important input to

- data rate estimates (DAQ and storage)
- tracking performance studies

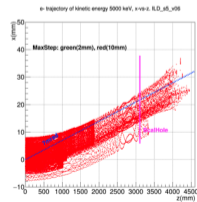
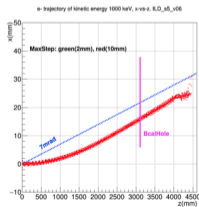
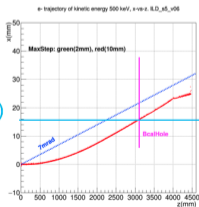
e- trajectories: Large(3.5T) and Small(4T)

Electron
X vs ZI5_v06
(500GeV)

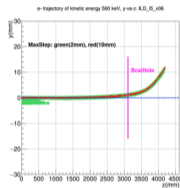
500keV

1000keV

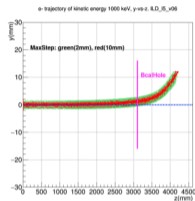
2000keV

Electron
X vs Zs5_v06
(500GeV)

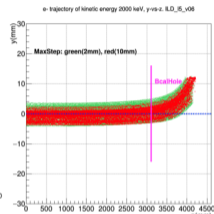
e- trajectories: Large(3.5T) and Small(4T)

Electron
Y.vs.ZI5_v06
(500GeV)

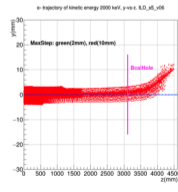
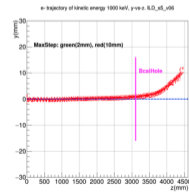
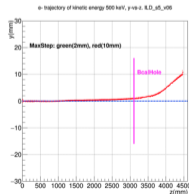
500keV



1000keV



2000keV

Electron
Y.vs.Zs5_v06
(500GeV)

- Low energy e- were simulated by Geant4 gun.
 - Fixed kinetic energy
 - Uniform random for $\theta < \pi/2$, $\phi < 2\pi$
 - 10k of e- were simulated

Number of SimHits (energy in keV)

E(keV)	VXD	SIT	TPC	FTD
E1000	0	0	0	0
E2000	0	0	0	0
E3000	0	0	0	0
E5000	0	0	0	0
E10000	50729	284	581	3

E(keV)	BCal	ECal	HCal
E1000	0	0	0
E2000	0	0	0
E3000	0	0	2
E5000	6	0	7
E10000	35	30	23

Ecut > 1 MeV
is safe enough



- no news today



- started production of pending samples:
- additional samples requested for Bhaba and nu ν events
 - issue w/ pre-staging large file sets at DESY-SE addressed:
 - split the production in smaller chunks to have **enough disk buffering capacity**

- missing 1 TeV $t\bar{t}$ -events
 - resource estimate for storage: **200 TB !!**
 - almost same as total 500 GeV production
 - original large statistics sample had been produced for Higgs self-coupling analysis
 - **suggestion** produce $\sim 5\%$ of these, as only needed as bg for one benchmark