

Software Coordinators Report

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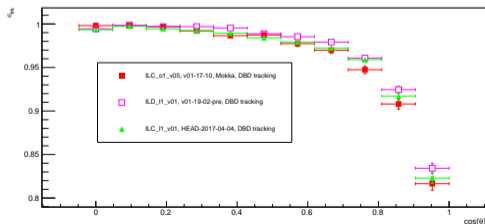
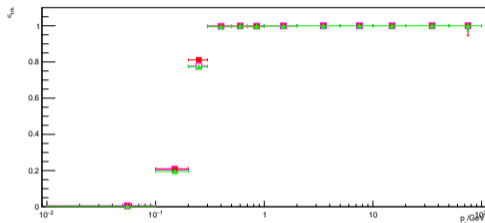
ILD SW&Ana Meeting, May 24, 2017

- Generator
- Simulation
- Reconstruction
- MC Production
- DD4hep Mini-Workshop

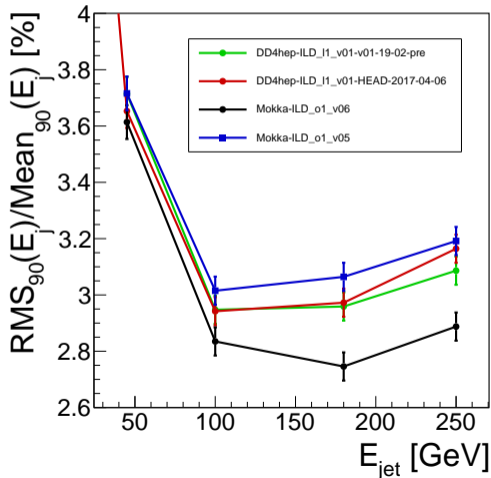
- not much progress since last report
- Whizard authors are still addressing open *show stoppers*
 - Whizard-Pythia interface and quark connections in 4f events
 - issue with ISR computation

- little activity since Lyon meeting
- decisions in last ET meeting:
 - use Tesla geometry for Hcal barrel in MC mass production
 - with *hybrid readout*
 - make the Ecal thicker - towards the *inside*
 - detailed numbers to be provided by Henry
 - leave the VXD and SIT geometry *as is* for now
 - continue investigation of VXD cable routing

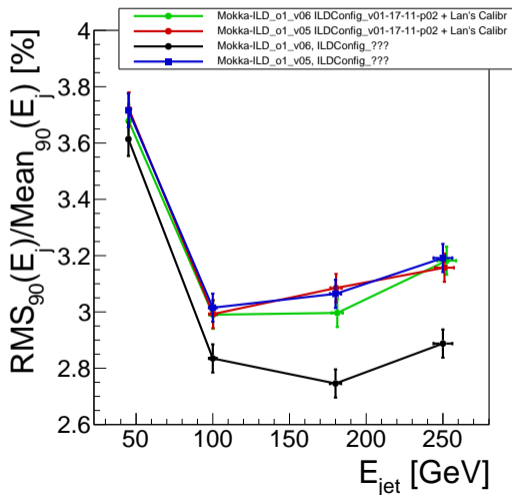
- achieve comparable (or better) performance for the tracking
 - efficiencies and resolution
- many more *detailed checks and validation* needed:
 - fake rates, broken tracks, track state at Calo,...
- started to finalize the transition to DD4hep
 - for patrec code and in *MarlinTrk* interface



- achieve comparable or better JER compared to DBD model
ILD_v01_v05
- one post-DBD model has shown yet better performance
- *under investigation by calorimeter group*



- produced JER with last *official* iLCSoft release with **Mokka** and corresponding *official* steering files: **v01-17-11-p02**
 - use updated calibration numbers
- observe **consistent JER** for **both models**: ILD_o1_v05 and ILD_o1_v06
 - yet worse than JER with ILD_o1_v06 with semi-private code and configuration
- investigation ongoing



- calibration samples produced with ILDDirac and v01-19-02

```
/ilc/prod/ilc/mc-opt/ild/<data_type>/calib/<event_type>/<model>/v01-19-02/<jobGroup>
```

```
<data_type> = sim, rec
```

```
<event_type> = single, uds
```

```
<model> = ILD_o1_v05, ILD_l1_v01, ILD_s1_v01
```

```
<jobGroup> = u002 for sim, u003 for rec.
```

- file name of single particle samples:
 - sv01-19-02.m.Pmcparticles_PDGXX_MONYYGeV.u002.slcio
 - XX=13, 22,130, YY=1,2,5,10,20,50,100 - 10k evts/file
- file names of uds samples:
 - rv01-19-02.sv019-02.m.PZudsXX_YY.u003.slcio
 - XX=30, 40, 60, 91, 120, 160, 200, 240, 300, 350, 400, 500
 - YY=00~09, 1k evts/file

- last week at CERN discussed the treatment of *conditions data* and *alignment*
 - reached agreement on how to separate *constant* detector geometry and *changing* alignment in one job
 - will work for **Gaudi** and **Marlin** frameworks
- implications on MarlinTrk/aidaTT:
 - assume that for iLCSoft the alignment does not change during the job
 - can use the *constant* detector geometry with *one* set of alignment constants for tracking geometry (*DDSurfaces*)
 - will implement possibility to load alignment on job startup
- when parallelisation will be introduced in **Marlin**, add the possibility to access changing *conditions and alignment data*
 - **after** ILD MC production