

# Software Coordinators Report

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ILD Phone Meeting, Jan 30, 2019

- Generator
- Simulation
- Reconstruction
- Monte Carlo Production

*report from Software Conveners meeting today*

- new Whizard release 2.7 available
  - currently installed and to be validated
  - known remaining issue:
    - re-weighting of events (e.g. for BSM) does not work currently breaks resonance history
- **To Do: validation for 250 GeV production**
- need circe2 file for the 250 beam parameters
  - to be extracted fromn Guinea-Pig
- open issue w/  $\gamma\gamma \rightarrow had$ :
  - in the past used Whizard 1 interface to Guinea-Pig for  $\gamma$ -spectra as input to Barklow-Peskin generator and Pyhtia
  - yet unclear if this also works w/ Whizard

- no update on ILD models
- AHcal calice group would like to use DD4hep
  - plan to have a more realistic model including gaps in HBUs etc
  - will use their own standalone package not lcgeo

- working on calibration for ILD\_ls5\_o3\_ v02 models (w/ SciEcal)
  - need to sort out technical issues w/ strip reconstruction
- issue observed in  $ee \rightarrow Z$  gamma events
  - see talk by T.Mizuno
- issue in TrueJet processor is fixed (M.Berggren)
  - jet energy now independent of jet number
- fixes to flavour tag:
  - have fixed version of LCFIVertex
    - needs re-fitting of the vertices
    - **need to provide steering file for this**
- continued work on 'thread-safe' version of LCIO
  - have now a version of SIO that works w/ LCIO
  - no multi-threading yet. . .

## ILD tracking efficiency, duplicate and fake rate

Efficiency:

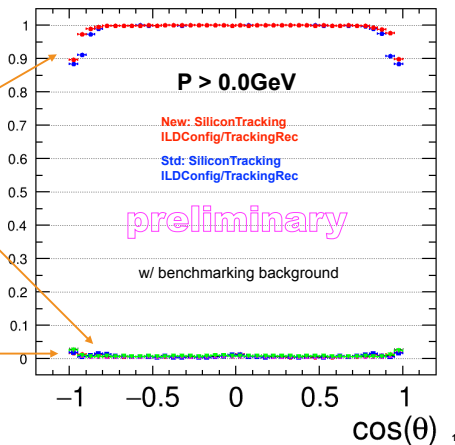
$$\epsilon = \frac{N_{Trk\_matched\_purity\_MCP}}{N_{MCP\_foundable,selected}}$$

Duplicate:

$$D = \frac{N_{Trk\_matched\_purity\_MCP,multiple}}{N_{MCP\_foundable,selected}}$$

Fake rate:

$$\zeta = \frac{N_{Trk\_unmatched\_majority}}{N_{Trk\_reconstructed,all}}$$



DESY.

- nothing to report
- open production request: new uds,cc,bb samples with Whizard 2
  - question how much do we need ?
  - need large enough statistics for  $\cos(\theta)$  plot with JER for IDR