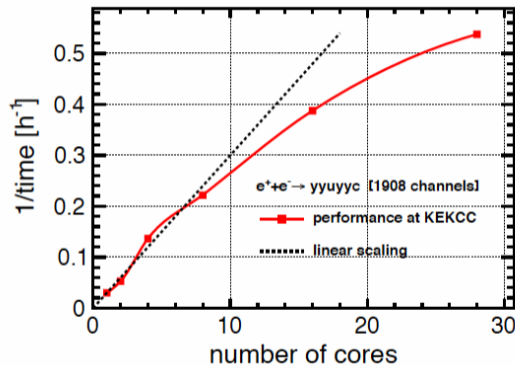# Software Coordinators Report

A.Miyamoto, F.Gaede

ILD SW&Ana Meeting, Feb 06, 2018

- Generator
- Simulation
- Reconstruction
- Monte Carlo Production

- J.Tian investigated new MPI parallelization in Whizard2
- observe considerable speedup:
  - yyuyyc [1908 channels]: 33 hours -> 2 hours
  - yyuyyuh [4104 channels]: 90 hours -> 8 hours
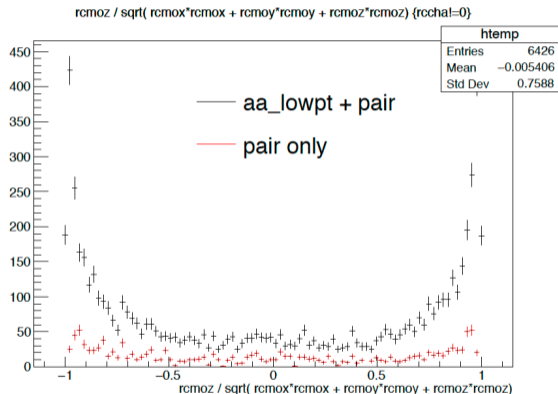 - bbuddubb [100732 channels]: failed
- further validation needed

could speed-up generation of 250 GeV sample considerably

$e^+e^- \to$ yyuyyc [1908 channels]

performance at KEKCC

linear scaling

x-axis: number of cores

y-axis: 1/time [h^{-1}]

- missing implementation of QD0 (and other downstream items) in current simulation models
  - affects the bg-round rates for pair bg back scattering
  - will check with MDI people and see if a design exists for new L*

- discussion on gap between Hcal barrel and endcap in simulation models
  - size of gap has been reduced somewhat in order to account for thicker Ecal endcap
  - decided in ET to not adapt the other detectors in sim. models
    - eventually need new engineering model
  - **HCal Services (electronics) are implemented in current models**

- fixed issue in *Overlay* processor
  - incorrect steering parameter caused the same event for pair bg to be overlaid in one job
  - not the case for aa-lowpt
- rewrote *logic for randomization* from scratch

fixes problem in bg-overlay reported by D.Jeans in last meeting

rcmoz / sqrt(rcmox*rcmox + rcmoy*rcmoy + rcmoz*rcmoz) {rccha!=0}

htemp	
Entries	6426
Mean	−0.005406
Std Dev	0.7588

aa_lowpt + pair

pair only

Monte Carlo test production A.Miyamoto, H.Ono

- developed script for producing large SM sample with ILCDirac
- discussion on treatment of *meta-data* in DDSim:
  - *processID, σ, polarization, event and run numbers,...*
  - current solution involves steering parameters to be set correctly
- preferred solution for ILCDirac:
  - copy of parameters directly from generator files
  - add relevant meta data in *splitting step* before actual production
  - **investigate if this can be implemented in DDSim (R.E.)**