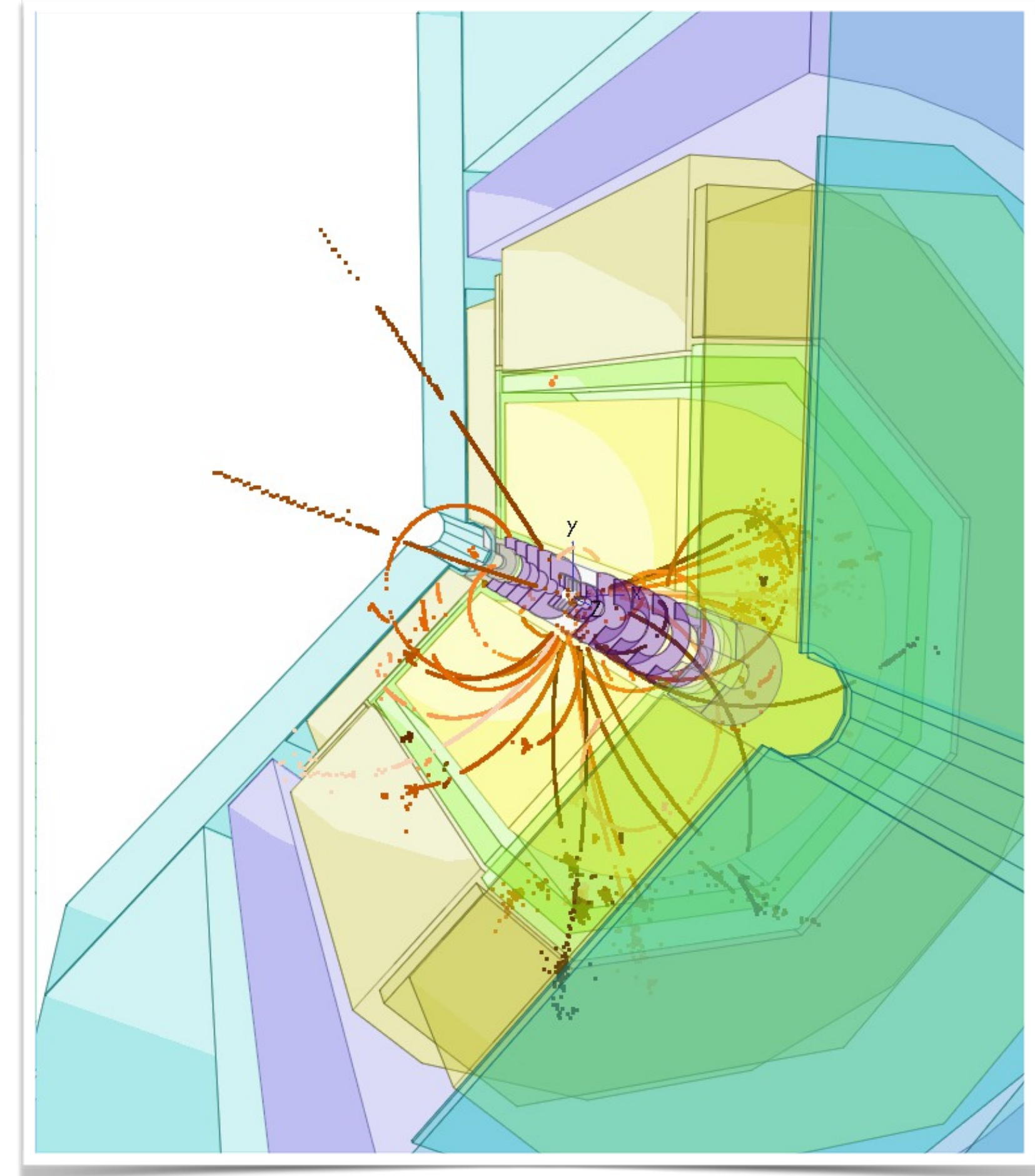# Software Coordinator Report

ILD Software and Analysis Meeting

Frank Gaede, DESY, 16.12.20

Outline

- Generator

- Simulation

- Reconstruction

- Monte Carlo Production

- Julia Tutorial

Generator

M.Berggren, J.Tian

- no news yet onproblem with cross section of samples with virtual photons
  - still work in progress w/ Whizard authors

- adapting TrueJet code running with new MCParticle format
- observed a chance for double counting in generation w/ 3f events
  - no problem in samples produced so far (real photons)
  - need to adjust the cuts appropriately
  - work in progress …

- observed technical issue w/ 94 objects (created in Pythia):
  - for Higgs samples the di-quark input into 94 object has total cms energy
  - output of final state particles for simulation seems OK
  - to be sorted out/ understood
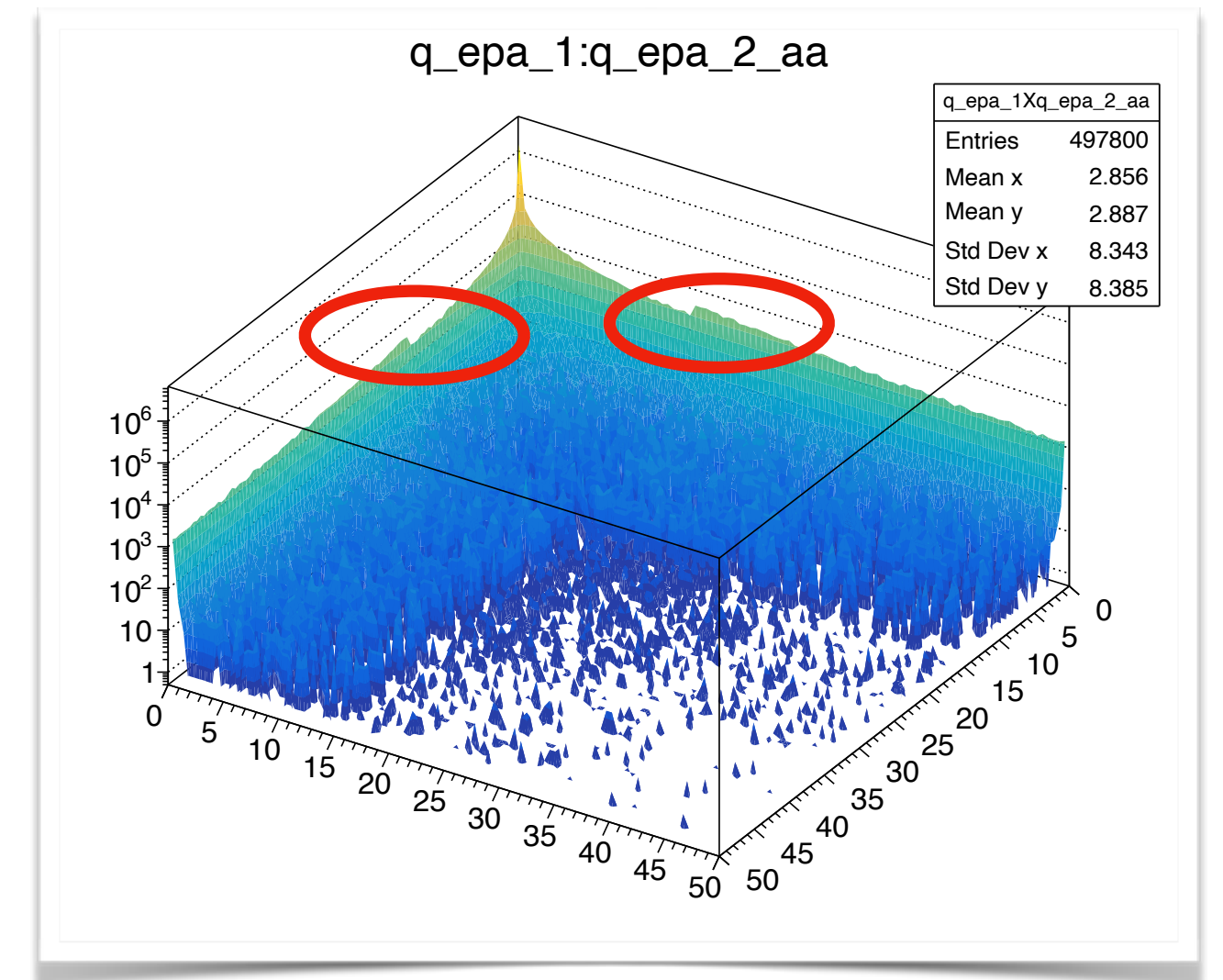
Simulation

D.Jeans

- continued to investigate spurious crashes observed in running mass production

  - ~ one per mille of 2f -> had jobs crashed

    - currently investigating on suspicious event…

- given the low occurrence of this, SW convenors agreed that this is not a problem for current production

Reconstruction

R.Ete

- RE: started work on more realistic time measurement in Calorimeter Digitizer

  - will have a report in a future SW&Ana meeting

- MB: adapted TrueJet processor to new MCParticle format in generated files

  - discussion how to provide backward-compatibility

- agreement to aim for a n**ew iLCSoft release for analysis** in Q1 next year:

  - improvements in HLR tools

  - minor bug fix in LCIO

  - EventSummary files

  - …

Monte Carlo Production

A.Miyamoto, H.Ono

- HO finished re-submission of some unfinished jobs in production so far

- will soon start production of some of the aa->2f/3f files

  - with this we will then have all generated samples at least partially run through the

- discussion with French colleagues about SDHCal production and additional computing resources to be made available at IN2P3 site in Lyon

  - storage and compute power

check status of production at this web page:
https://ild.ngt.ndu.ac.jp/mc-prod/prodmon/prodsum-mc2020.html

ILD Analysis and ML with Julia
Tutorial by Jan Strube, PNNL

- Topics:

  - introduction to Julia

  - Julia on the DESY Jupyterhub

  - Julia on the DESY NAF / KEKCC as an alternative

  - first steps with LCIO (using the recoil mass / btag examples)

    - plotting with Julia

  - first steps with deep learning (using a simple calorimeter calibration as example)

- Q&A

In case you missed it - the tutorial has been recorded:
https://agenda.linearcollider.org/event/9022/

Happy Holidays
and
Best Wishes for 2021

Stay Healthy !