

# Software Coordinators Report

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ILD SW&Ana Meeting, May 23, 2018

- Status of production w/ v02-00
  - issue in treatment of charged leptons
- new patch release v02-00-01

- large fraction ( $>50\%$ ) already done
  - see report A.Miyamoto last ILD meeting: <http://goo.gl/kQ3zgn>
  - mostly *fully hadronic* samples
- issue reported:
  - observed spurious crashes in events w/ tau pairs
- tracked down to a Geant4 bug w/ tau decays, however it also

revealed also a major issue in our treatment of lepton pairs

- a recent *fix* to DD4hep had removed the condition of *non-zero* lifetime for particles to be given to Geant4
  - needed to correctly treat *zero-lifetime* particles in hadronic decay chains
- this caused incorrect treatment of events with charged lepton pairs and FSR
  - these are written out as “*decay chains*”, where the lepton is repeated several times
  - FSR gammas from leptons were not simulated
  - in tau pairs one tau was duplicated and the lifetime was incorrect
- this is fixed in patch release v02-00-01
  - also includes now the **4T field map for the small ILD detector**
  - and a more current version of *fastjet*

will restart the production again with v02-00-01

- people working on benchmarks can still use the v02-00 samples for the time being to develop their analysis code