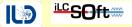


Software Coordinators Report

 $\mathsf{F}.\mathsf{Gaede}$

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:
 - $\bullet\,$ observed spurious crashes in events w/ tau pairs
- \bullet tracked down to a Geant4 bug w/ tau decays, however it also

revealed also a major issue in our treatment of lepton pairs

issue in treatment of lepton (pairs) in v02-00



- 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 where 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