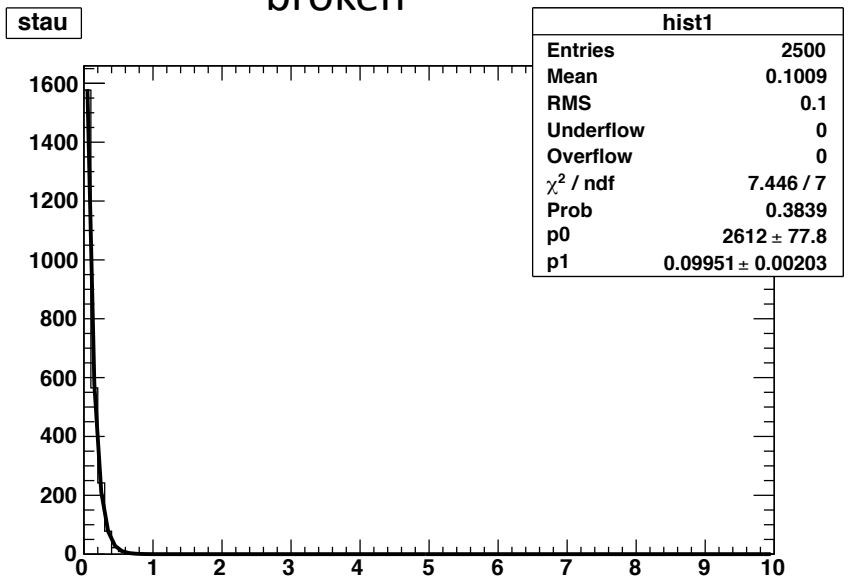
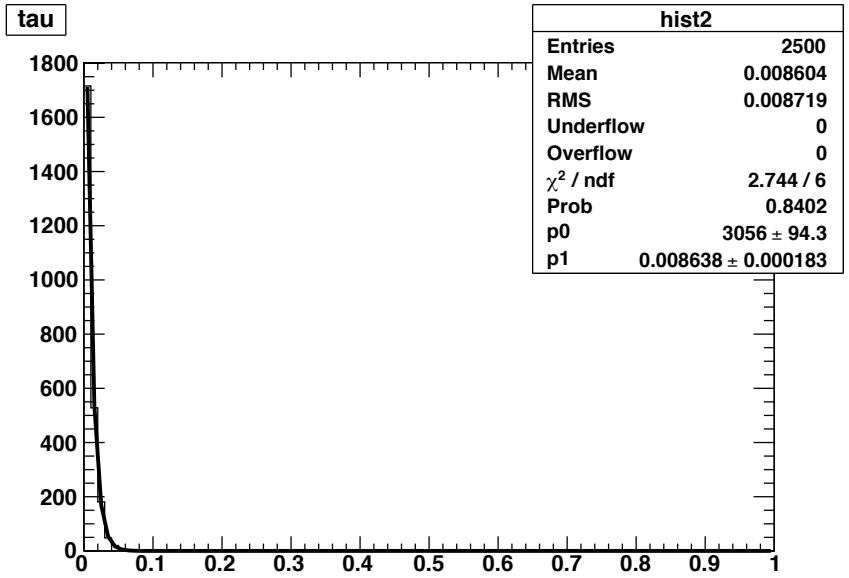
stau NLSP sample production

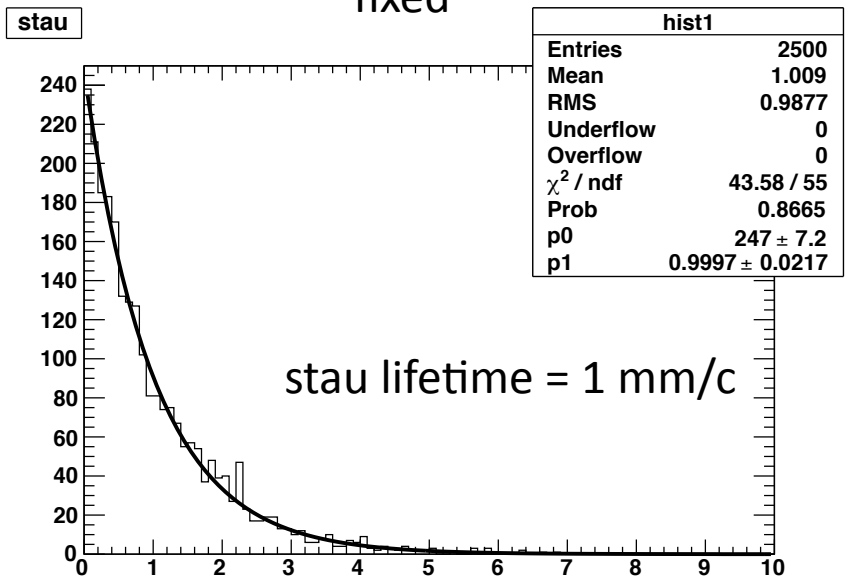
- need to generated signal MC files for stau NLSP analysis, LSP = O(eV) gravitino
  - e+e- -> stau+ stau- -> tau+ tau- LSP LSP
- stau & tau have nonzero lifetime
  - analysis target: ctau = 1 um ~ 1000 um
  - needs to be simulated carefully in Mokka/G4
- stau flight problem with JSF/Mokka
  - fixed in JSFStdHepWriter.cxx
- another problem: stau/tau does not fly as much as it should
  - cause: incorrect unit conversion from [cm] to [mm]
  - fixed in JSFStdHepWriter.cxx + JSFHadronizer.cxx

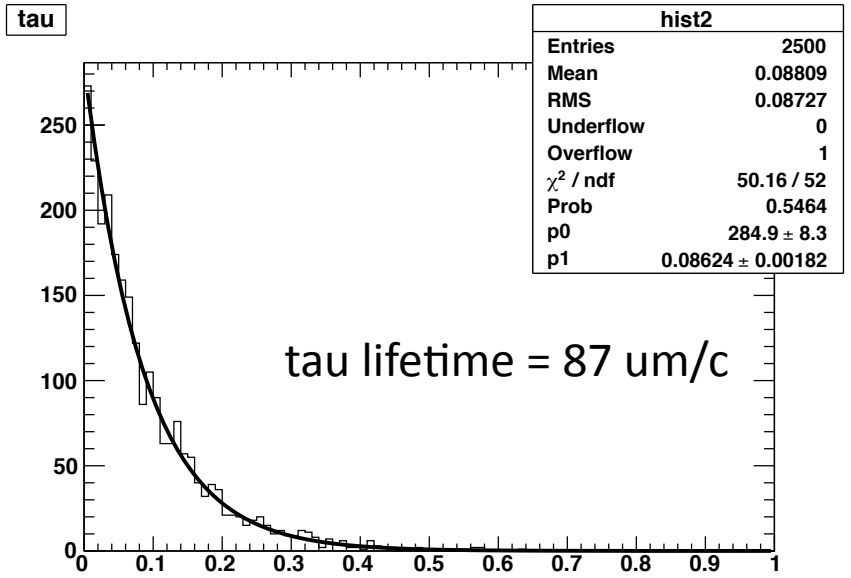
broken





fixed





implementation

- JSFHadronizer.cxx
  - rbuf[16] is now set to 0 (decay length)
  - this is okay since QuickSim (Fortran) uses rbuf[15] (lifetime) to calculate the decay length
- JSFStdHepWriter.cxx
  - new code in EventSource=5
  - randomize actual lifetime using exponential distribution for each particle
  - calculate elapsed time using the randomized lifetime, output in STDHEP VHEP(4) variable
  - VHEP(1-3) set to zero; Mokka only cares about VHEP(4)
    - verified to work correctly with Mokka/Marlin
  - does not need QuickSim anymore!