

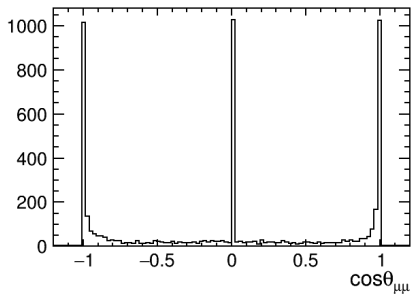
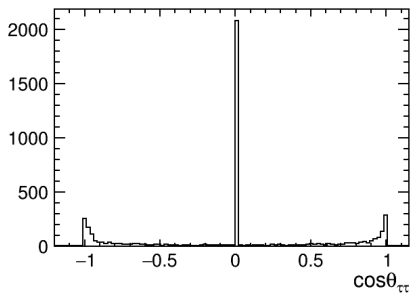
## status report

- Check tau-tau and mu-mu property (MC/PFO)
  - Invariant mass
  - Energy
  - CosTheta
- Reported at the Software analysis meeting

# Problems to be solved

PFO

very large peak at 0

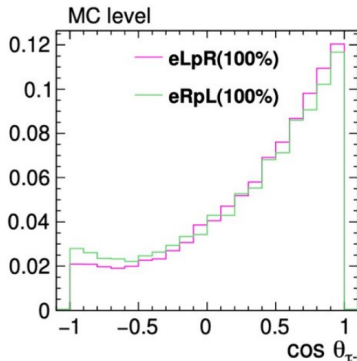
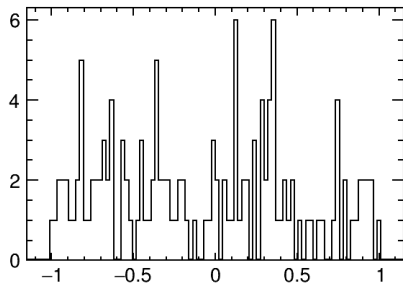


## Problems to be solved

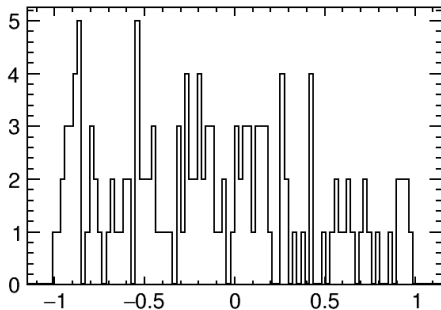
$e^+e^- \rightarrow \tau^+\tau^-$ , MC  
for  $\tau^- \rightarrow \pi^-\nu$  decay

left:250 GeV samples, right:500 GeV samples

few statistics..?



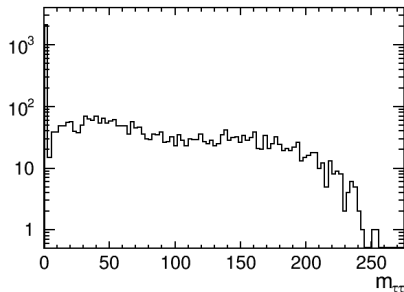
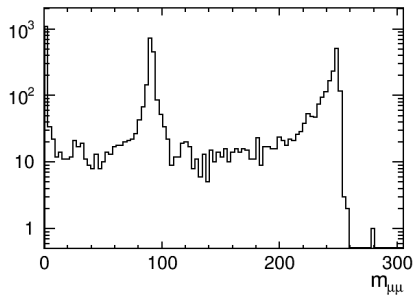
$e^+e^- \rightarrow \tau^+\tau^-$ , MC  
for  $\tau^+ \rightarrow \pi^+\nu$  decay



# Problems to be solved

PFO

sometimes invariant mass: greater than 250 GeV

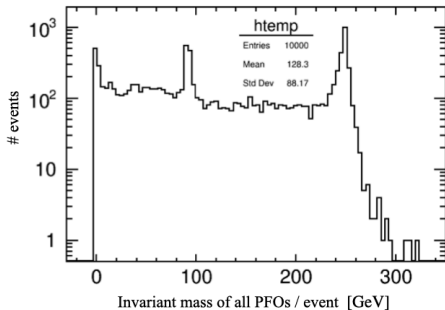
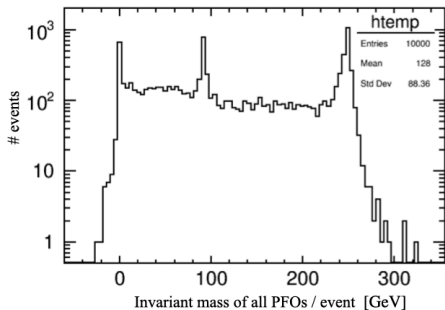




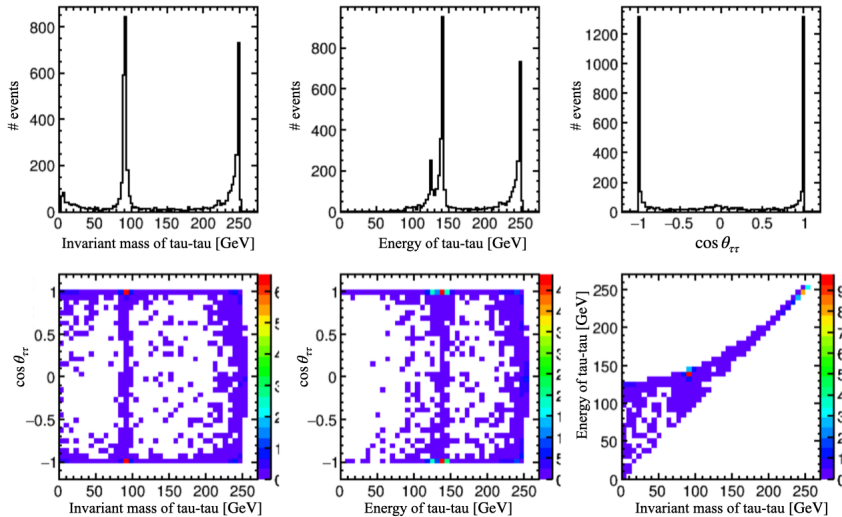
# Photon-like PFO

sometimes PFOs have a “negative” invariant mass.

This was a problem in the new photon energy correction processor: it is now fixed.

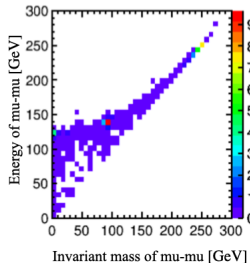
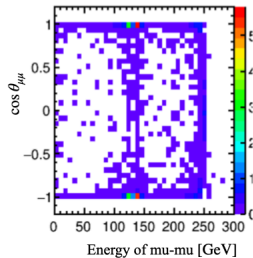
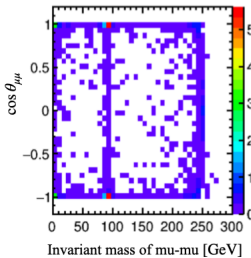
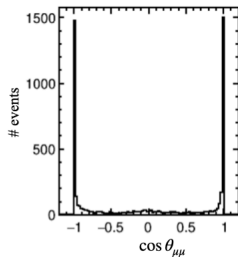
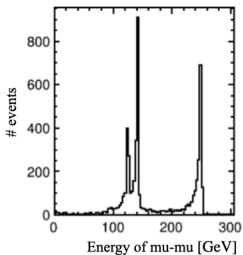
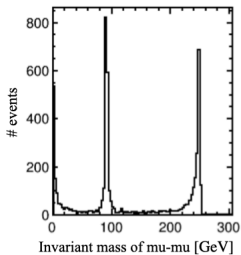


$$e^+e^- \rightarrow \tau^+\tau^-, \text{ MC}$$

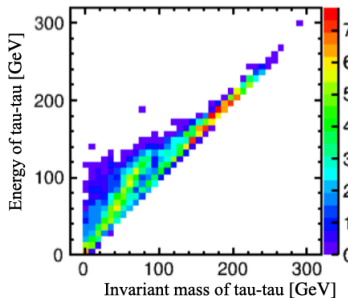
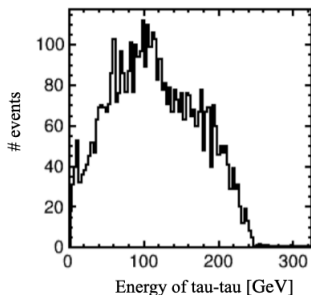
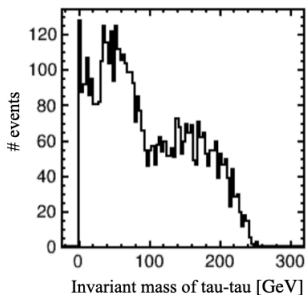




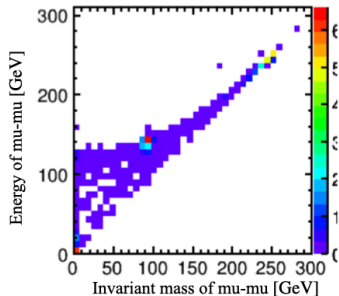
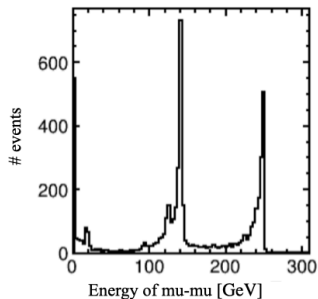
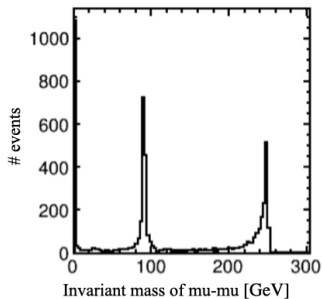
$e^+e^- \rightarrow \mu^+\mu^-$ , MC level



$e^+e^- \rightarrow \tau^+\tau^-$ , PFO



$e^+e^- \rightarrow \mu^+\mu^-$ , PFO



# Summary

- New Tau testsamples was checked
- Problem of negative invariant mass of PFOs was found
- There is no other problem found so far.
- I continue to study with new testsamples.