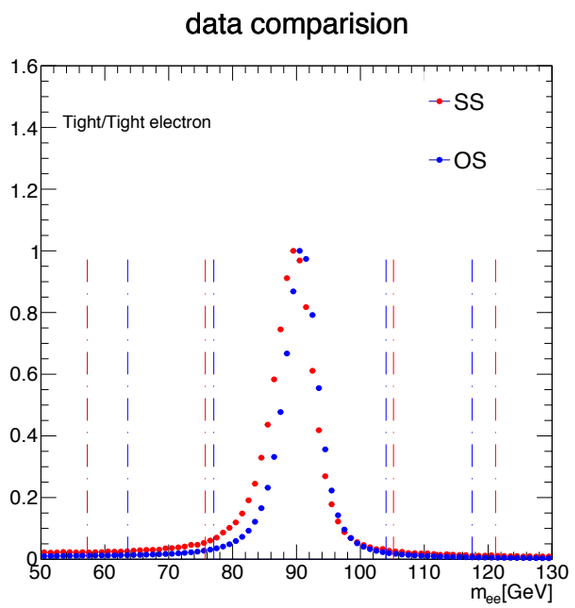
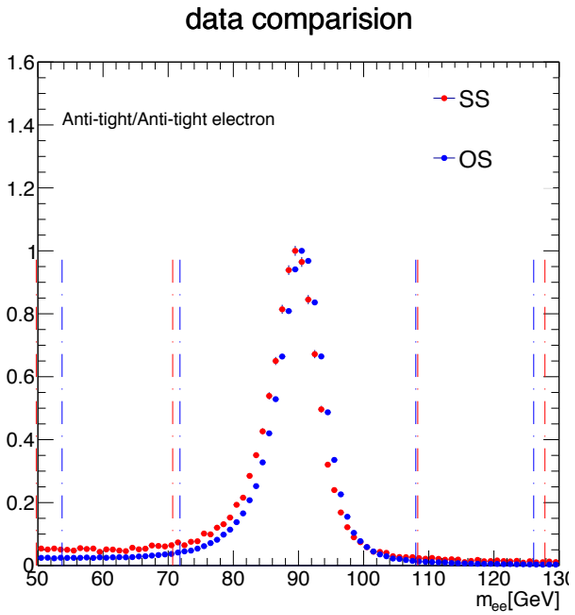
Update in QmisID estimation

Shuiting Xin

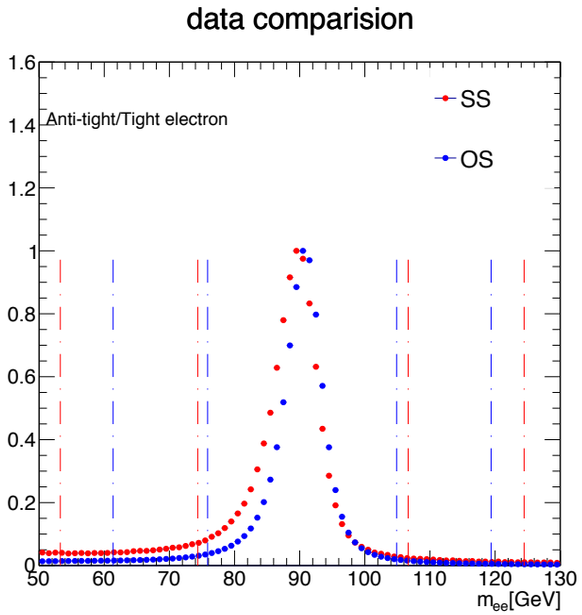
Comparison of the m_{ee} distribution between same-sign and opposite-sign data events



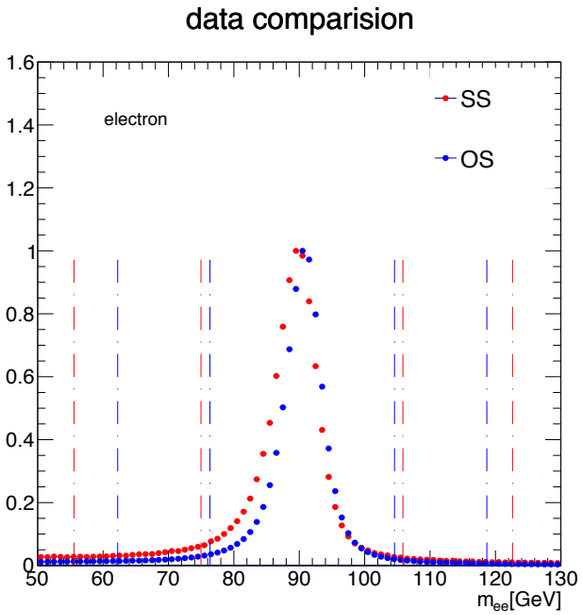
ElectronsCase 1



ElectronsCase 2



ElectronsCase 3



ElectronsCase 4

- dataset:15+16+17,80fb-1
- Variable “ElectronsCase” are used:

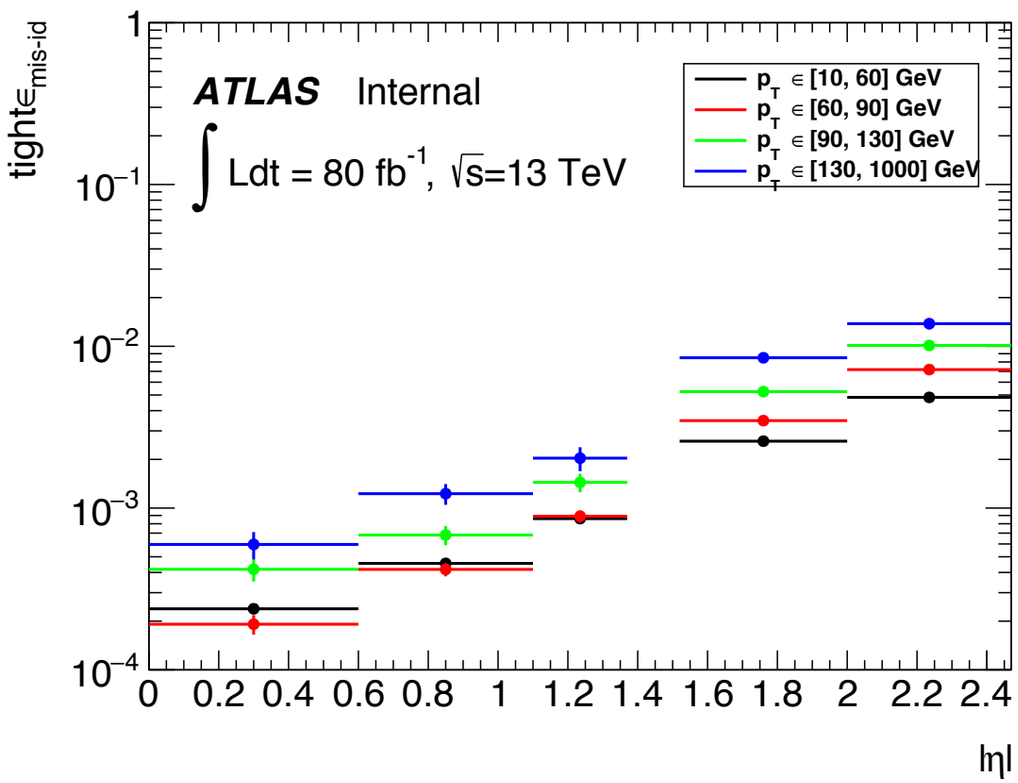
  1, both electrons are tight
  2, both electrons are anti-tight
  3, one tight and one anti-tight
  4, at least one tight

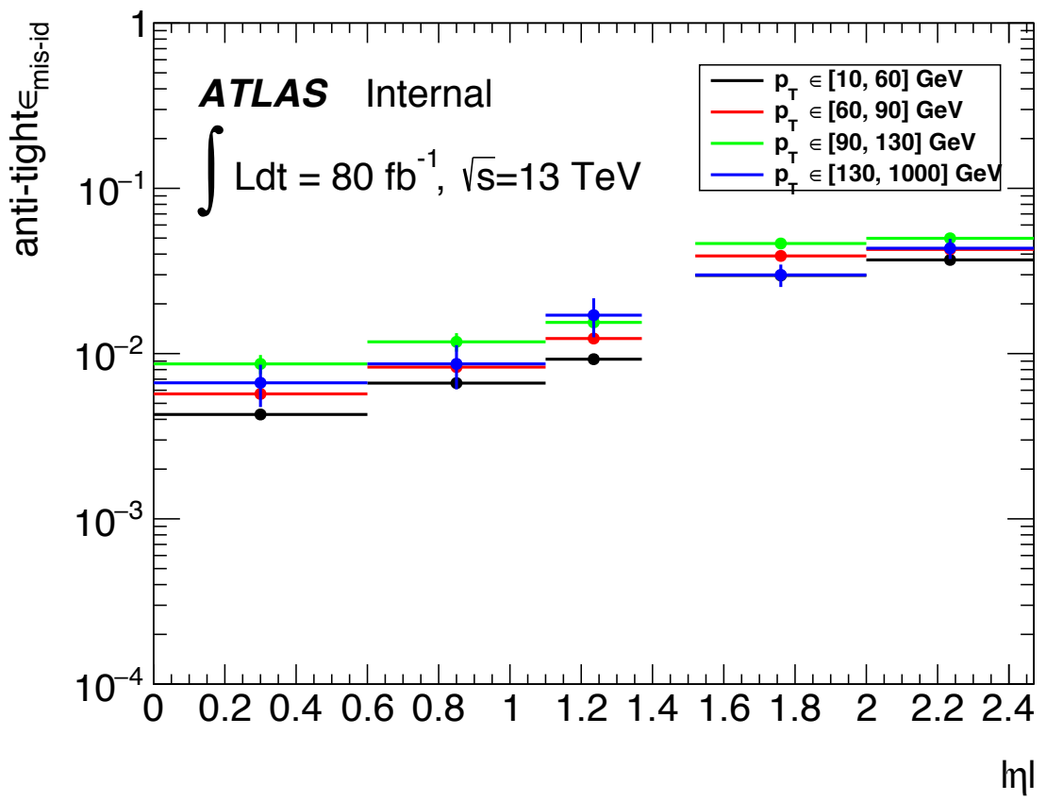
  Z-window($\pm 4\sigma$) and sideband(dashed line) are defined by its own fit.

- The peak for same-sign electrons is shifted with respect to opposite-sign electrons.Why?

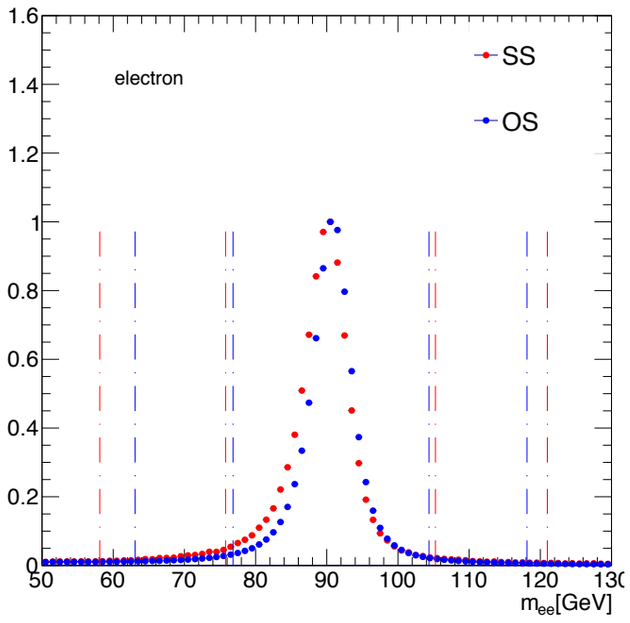
QMisID rates as a function of |eta| and p_t

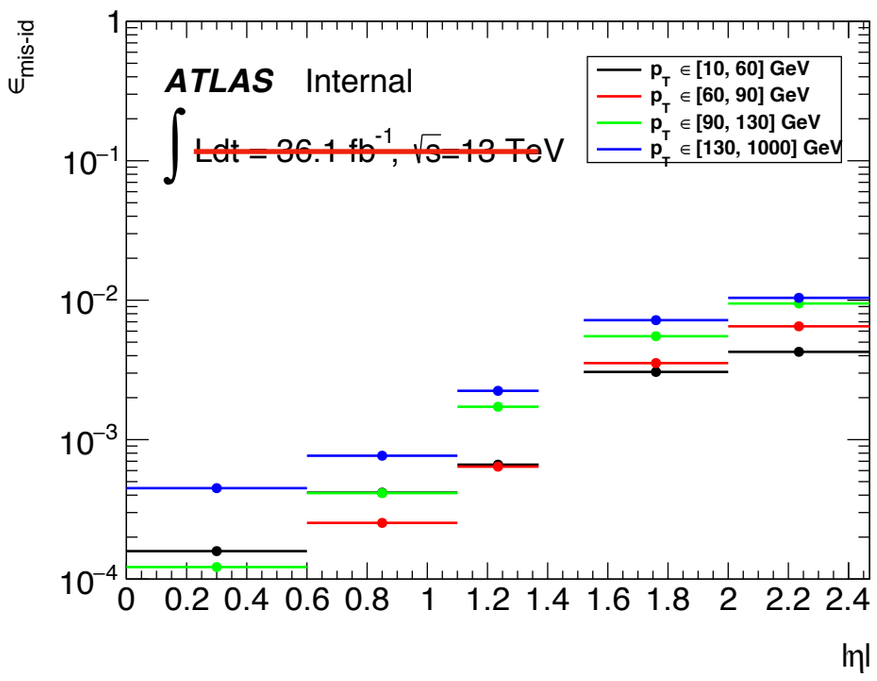
Derived from likelihood method going though selection ElectronCase 4

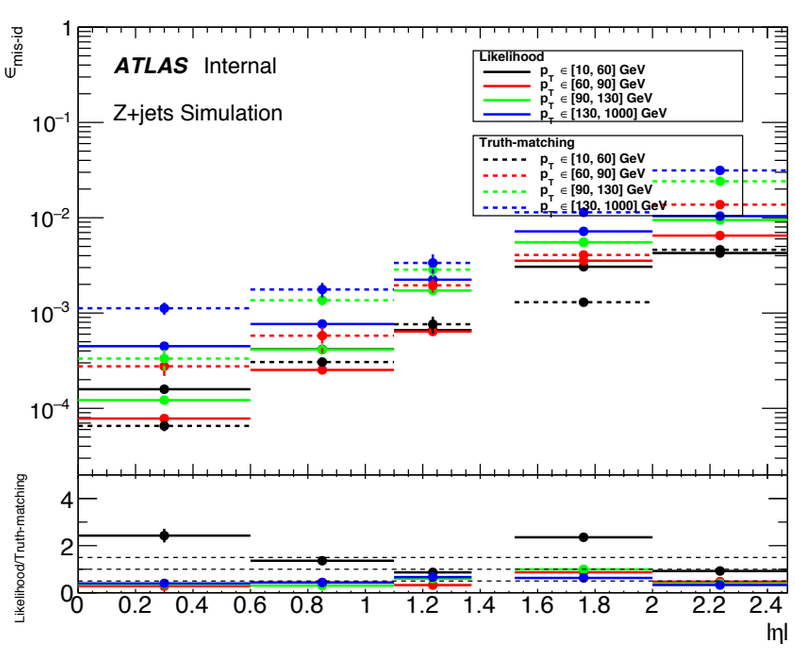




Closure test

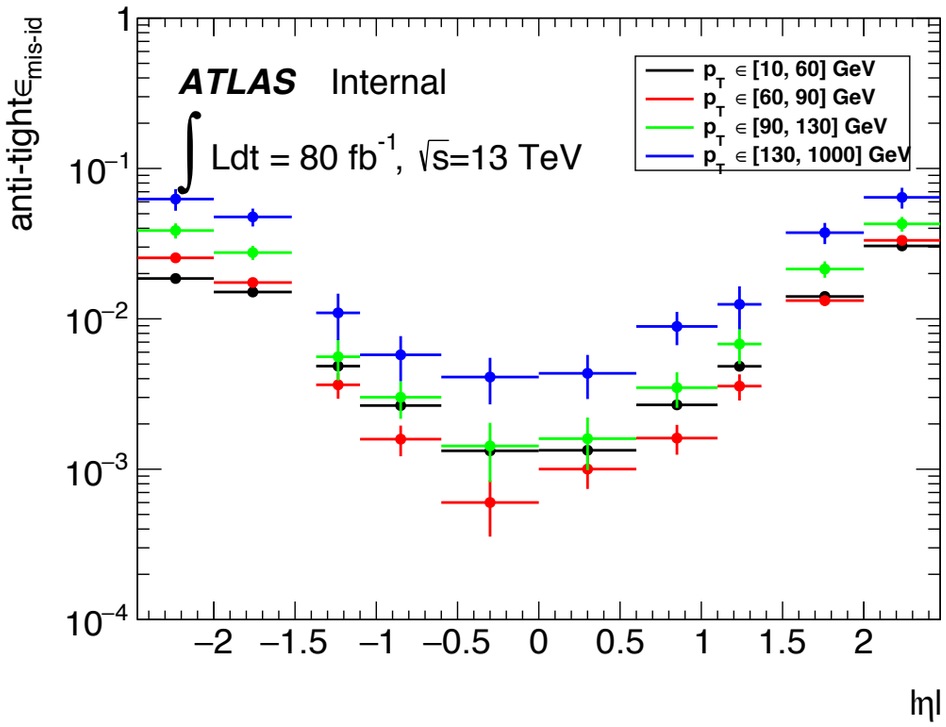






- derived from simulated *Z*+jets events and compared to the rates based on truth-matching
- ratio in Pt[10,60] region seems terrible, try to 1) add pt>20 GeV cut 2)merge bins to reduce statistical uncertainties.

QMisID rates of electrons and positrons(unfinshed)



Only get one electron rates, wrongly wrote the selection definition, try to fix it now.

To do list

- Apply new datasets, which add some few branches.
- Use p_t>20GeV to figure out new rates.
- Get the dependence of the rates on the charge-sign.