

Russell Reinhart Update

August 3, 2010

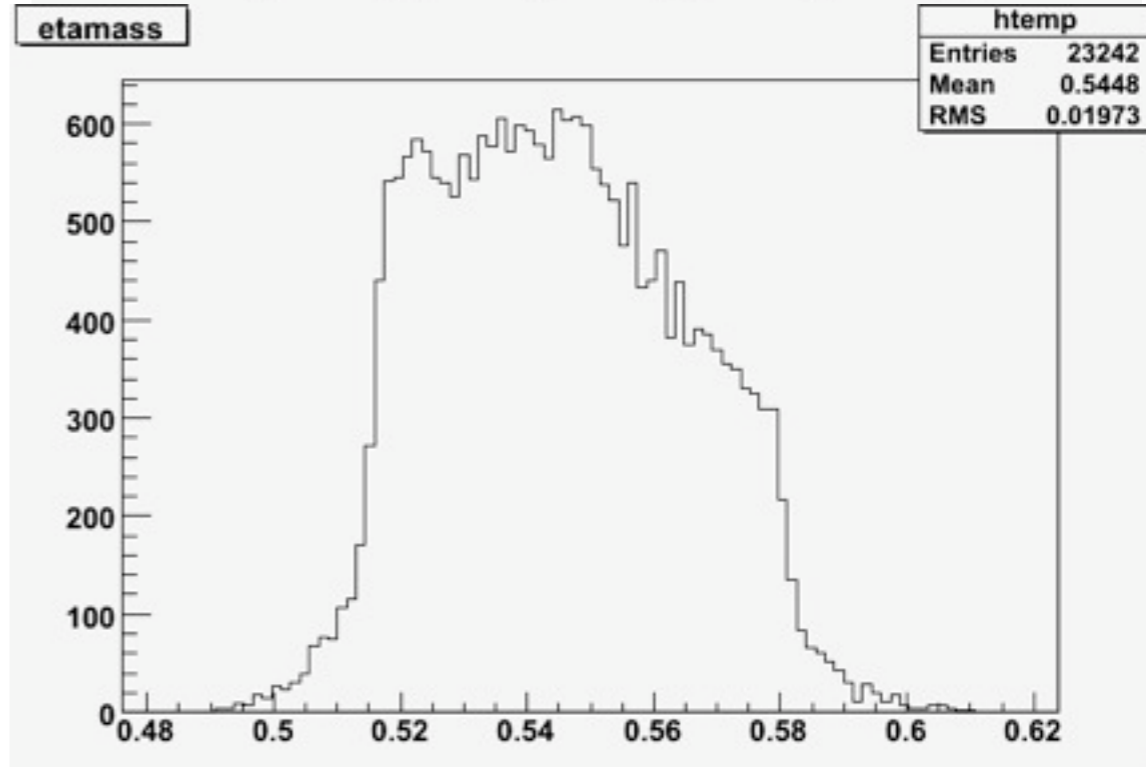
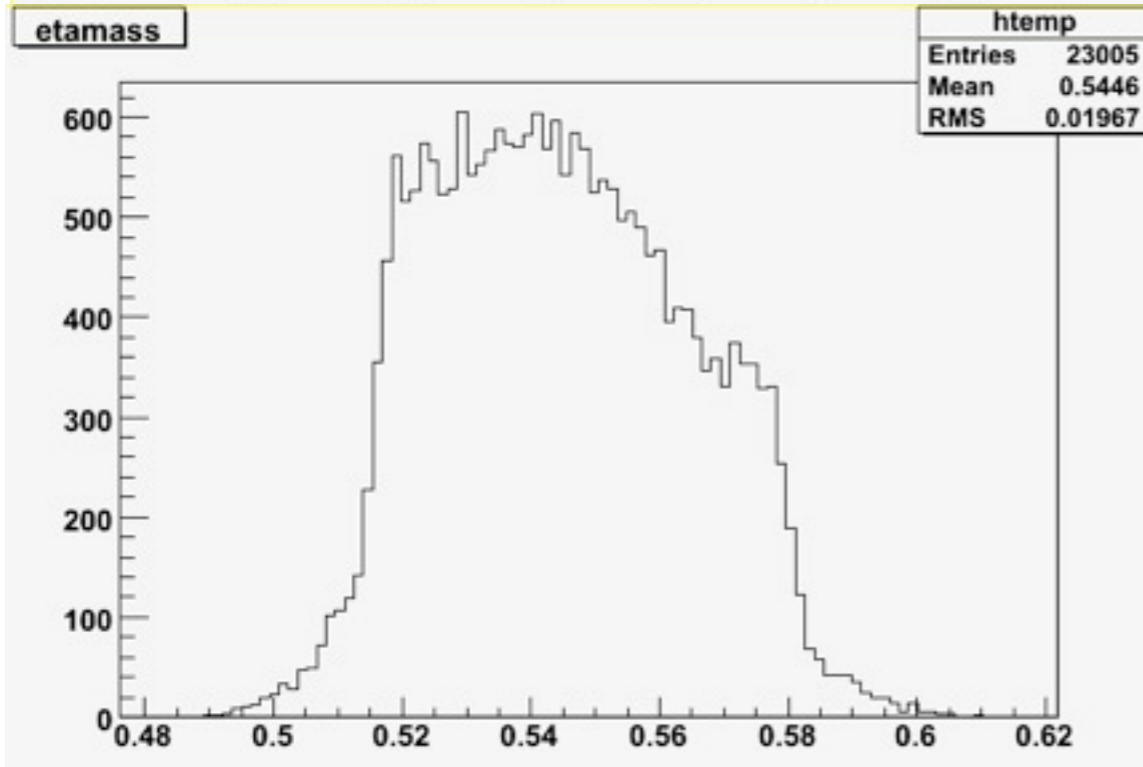
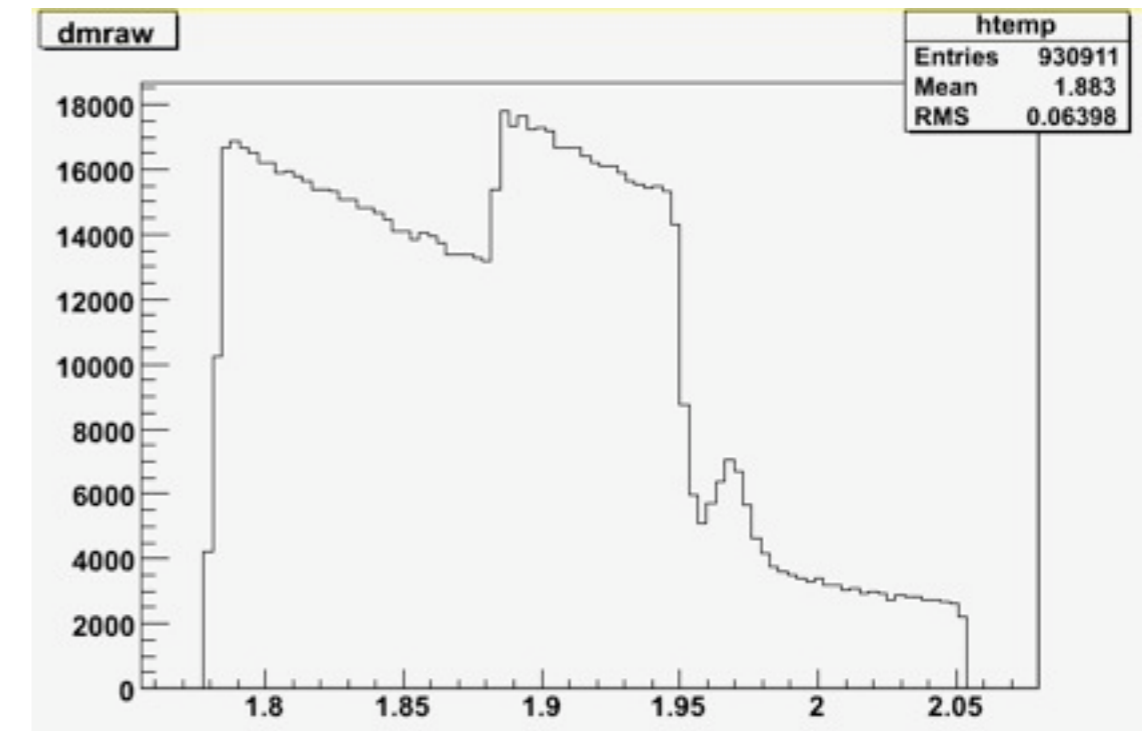
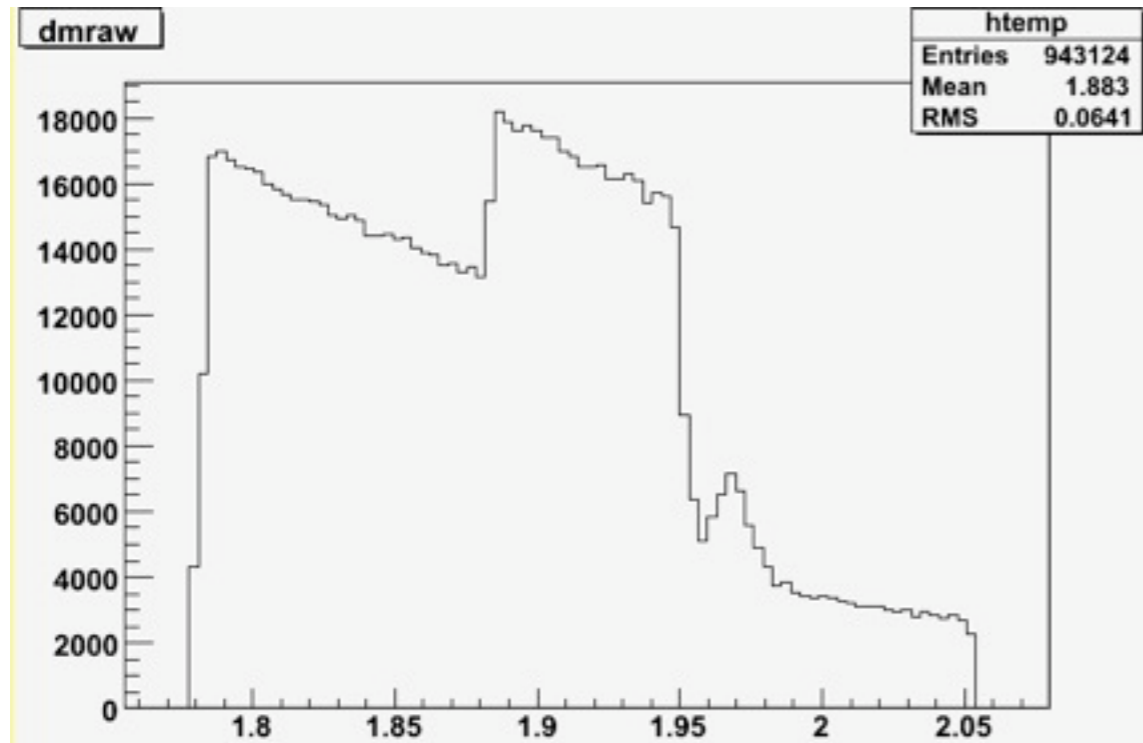
What I have been working on

- Look at photon smearing effect on modes:
 - Single Dsm --> KKpipi0
 - Single Dsm --> pieta
 - Single Dsm --> KsK
 - Single Dsm --> KKpi (to check)
- Look at how *dmraw* and *etamass* histograms change on these modes when photon smearing is added.

Single Dsm to KKpipi0

Photon smear

No photon smear

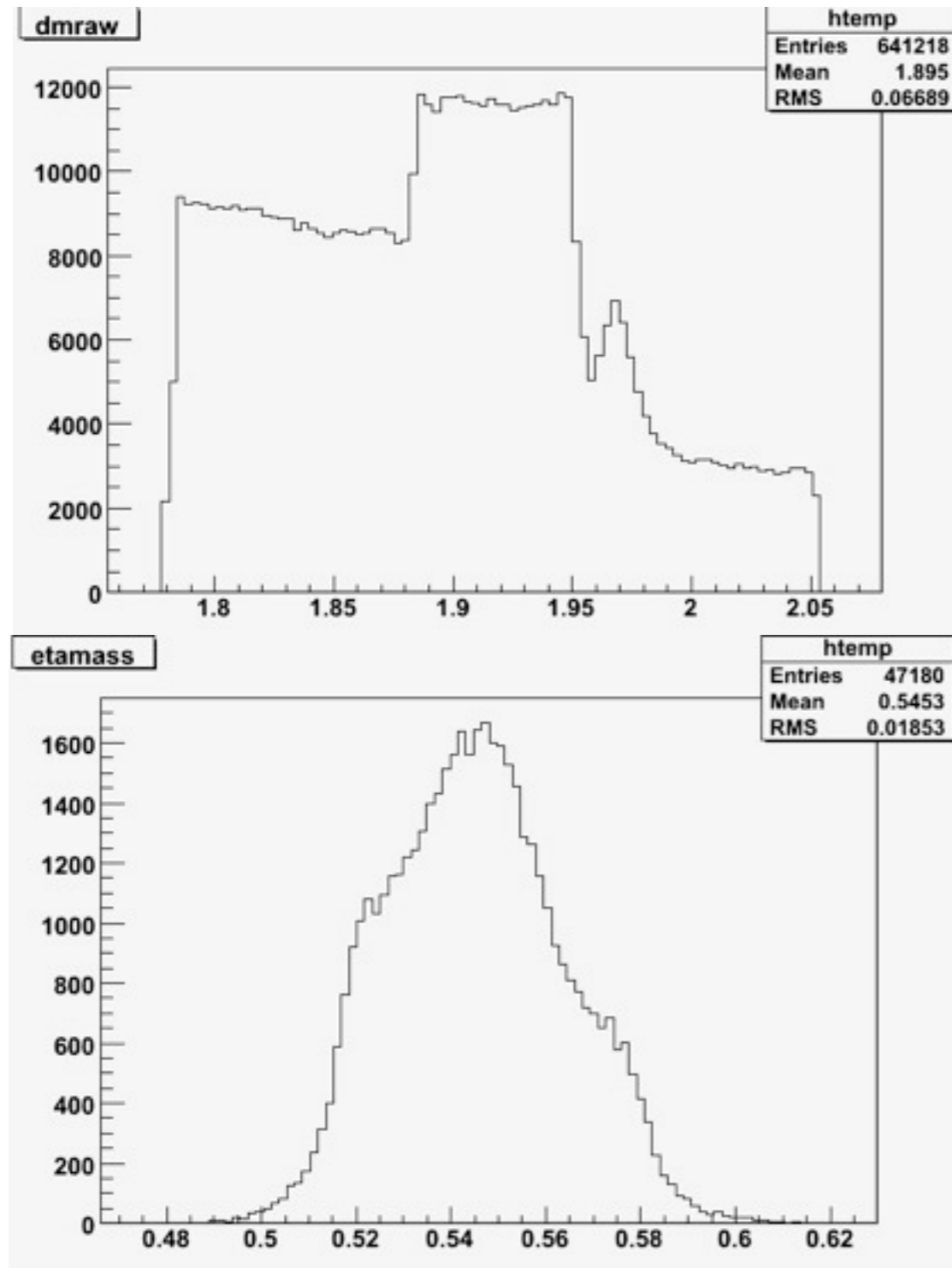


root files in: /nfs/cor/anal/rer87/dhad/forlearning1/ds-600/ds-600/
dtuple_c_80404_p2_various

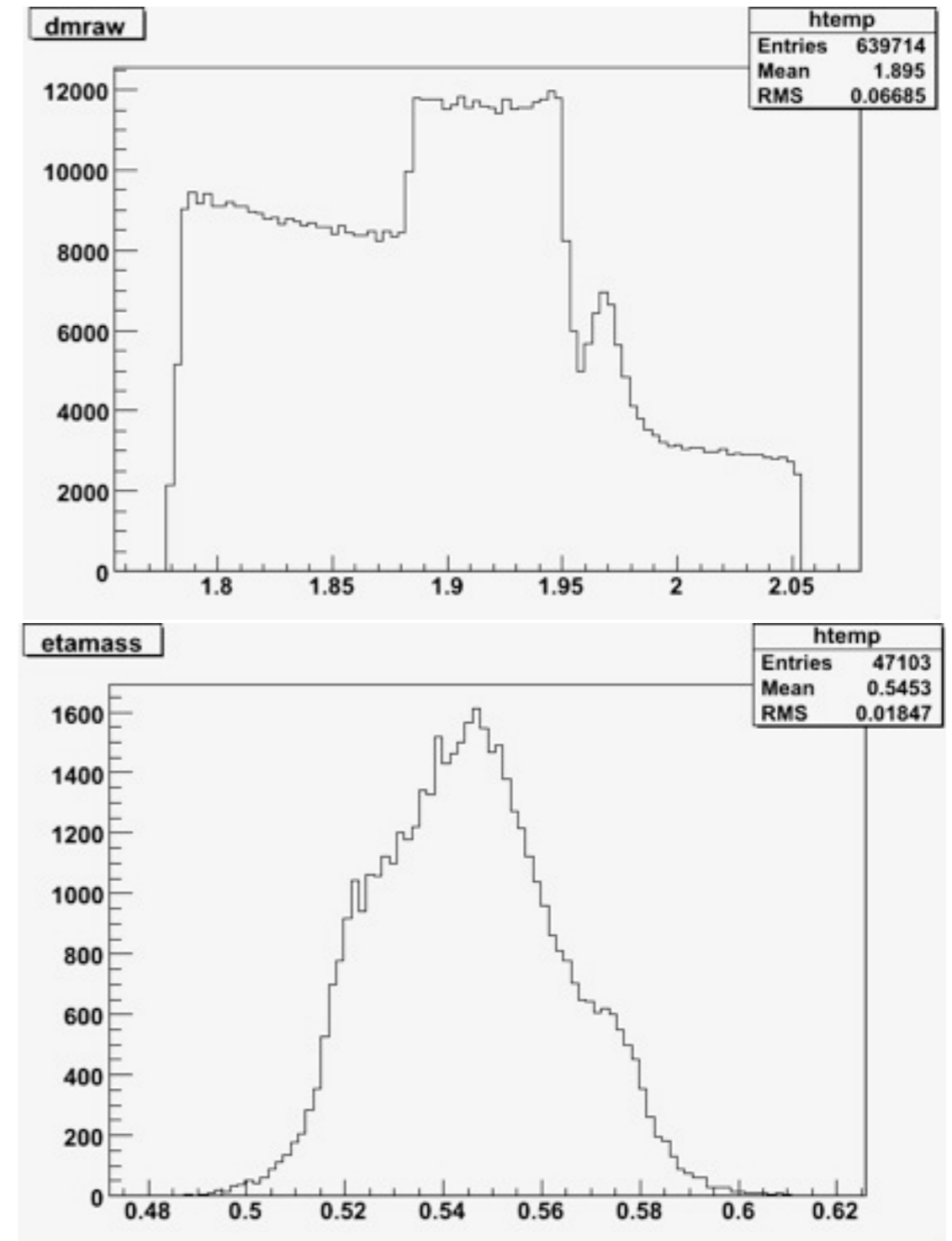
root files in: /nfs/cor/anal/rer87/dhad/forlearning2/ds-600/ds-600/
dtuple_c_80404_p2_various

Single Dsm to pieta

Photon smear



No photon smear

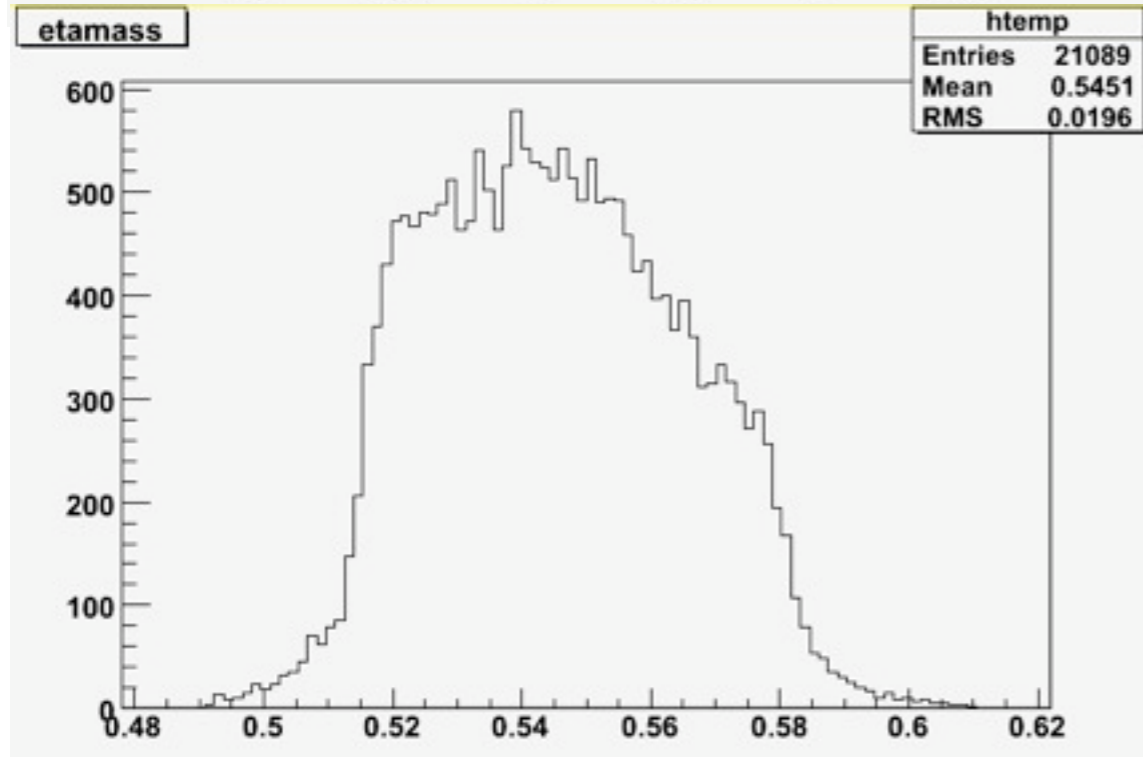
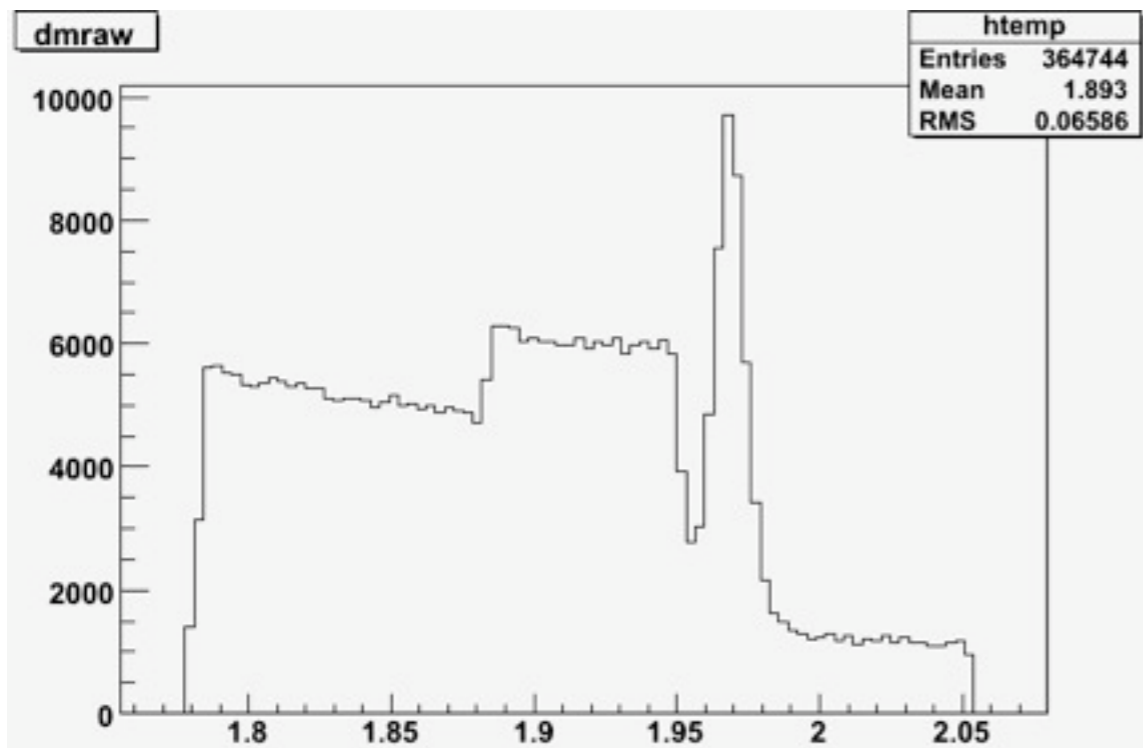


root files in: /nfs/cor/anal/rer87/dhad/forlearning1/ds-600/ds-600/
dtuple_c_80404_p2_various

root files in: /nfs/cor/anal/rer87/dhad/forlearning2/ds-600/ds-600/
dtuple_c_80404_p2_various

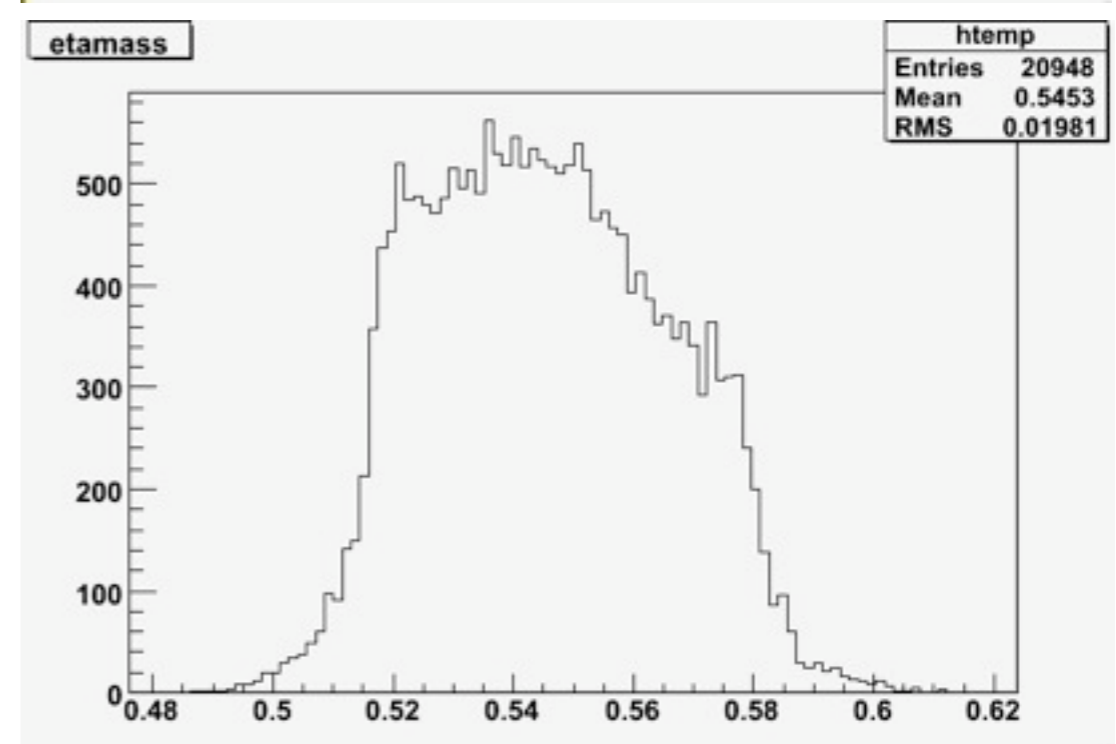
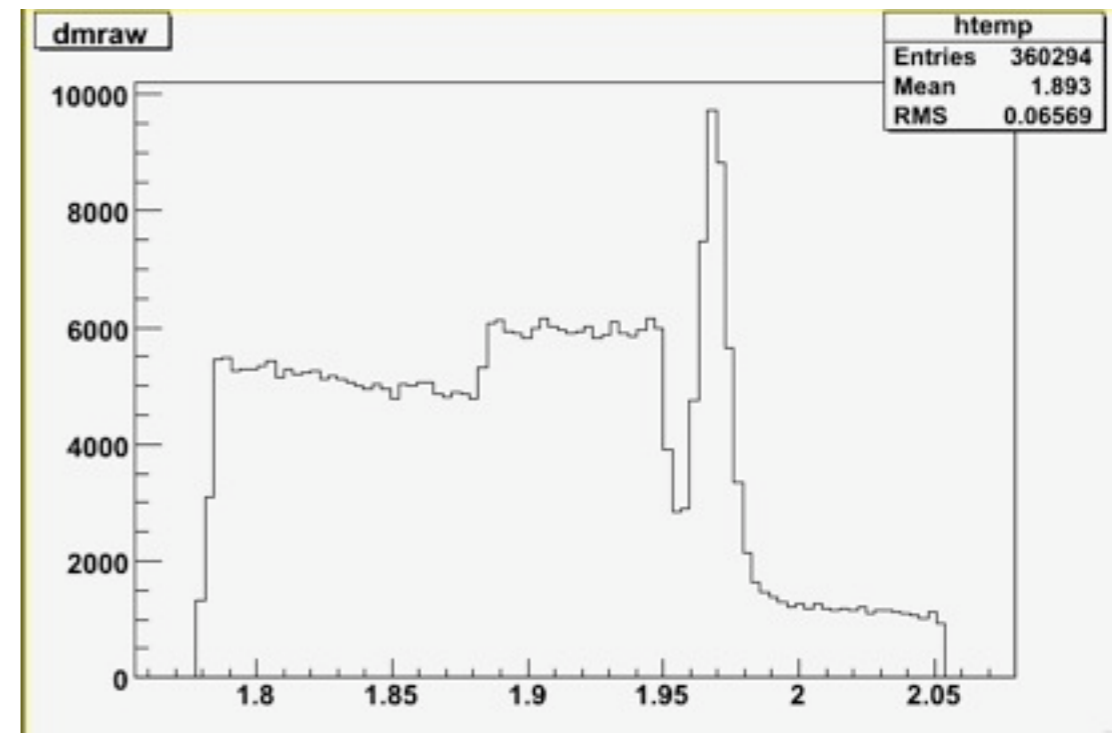
Single Dsm to KsK

Photon smear



root files in: /nfs/cor/anal/rer87/dhad/forlearning1/ds-600/ds-600/
dtuple_c_80404_p2_various

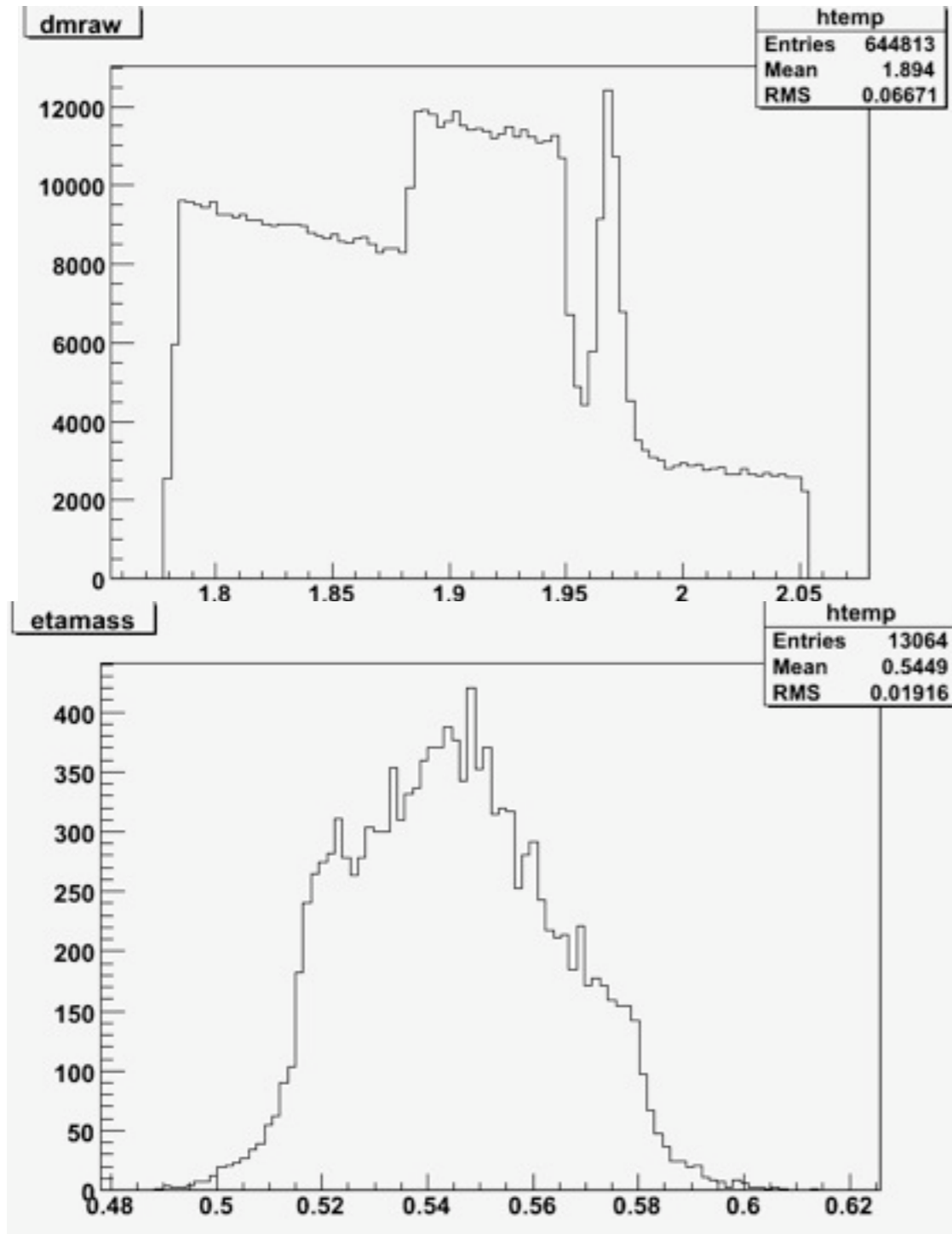
No photon smear



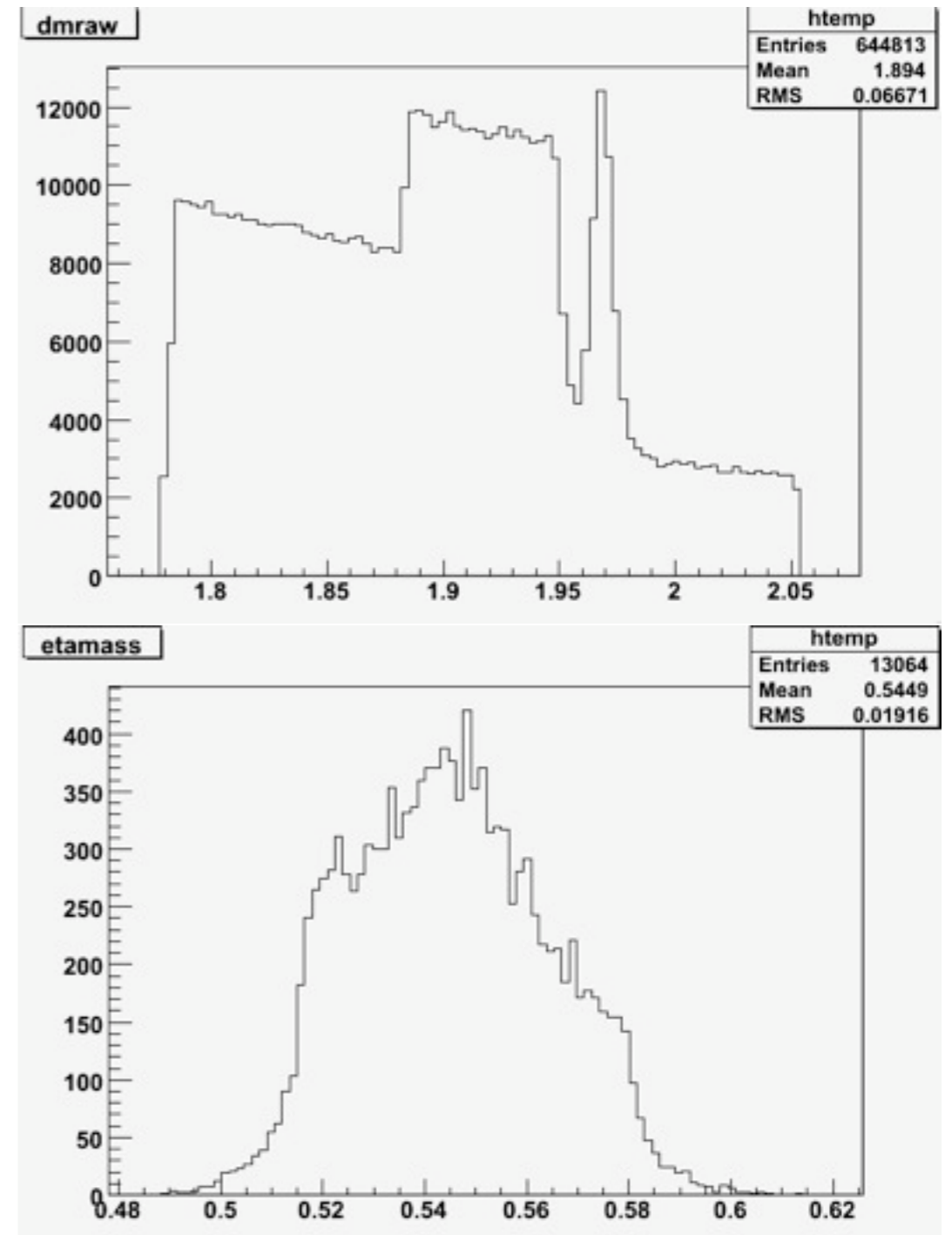
root files in: /nfs/cor/anal/rer87/dhad/forlearning2/ds-600/ds-600/
dtuple_c_80404_p2_various

Single Dsm to KKpi

Photon smear



No photon smear



root files in: /nfs/cor/anal/rer87/dhad/forlearning1/ds-600/ds-600/
dtuple_c_80404_p2_various

root files in: /nfs/cor/anal/rer87/dhad/forlearning2/ds-600/ds-600/
dtuple_c_80404_p2_various

Code that generated this:

original code:

```
if { $skim == "yes" && $smear_showers == "yes" } {
  puts "SMEARING SHOWERS IN EXISTING SKIM NOT SUPPORTED!!!! No smearing will be done."
}

setup_dtag standard -bcm_cut 1.83 -de_cut 0.1 -bcm_ds_cut 1.93 -mraw_cut 0.085
if { $smear_showers == "yes" && $skim == "no" } {
  module sel RandomModule
  random create
  prod sel /nfs/cor/an1/ponyisi/2006-4/build/Linux/shlib/C3ccProd
  C3ccProd FixShowers True
}
```

modified code:

```
#-----PHOTON SMEARING RER-----
if { $skim == "yes" && $smear_showers == "yes" } {
  module sel RandomModule
  random create
  prod sel C3ccProd
  C3ccProd FixShowers True
  C3ccProd FixEndcap True
}

#-----END PHOTON SMEARING RER-----

setup_dtag standard -bcm_cut 1.83 -de_cut 0.1 -bcm_ds_cut 1.93 -mraw_cut 0.085
if { $smear_showers == "yes" && $skim == "no" } {
  module sel RandomModule
  random create
  prod sel C3ccProd
  C3ccProd FixShowers True
  C3ccProd FixEndcap True
}
```

Questions (problems?)

- Is the code correct?
 - If so, very little difference in histograms when photon smearing is added.
- Am I looking at relevant histograms?
- What is next? (presuming the work done thus far is correct)