P13TMBfixer program

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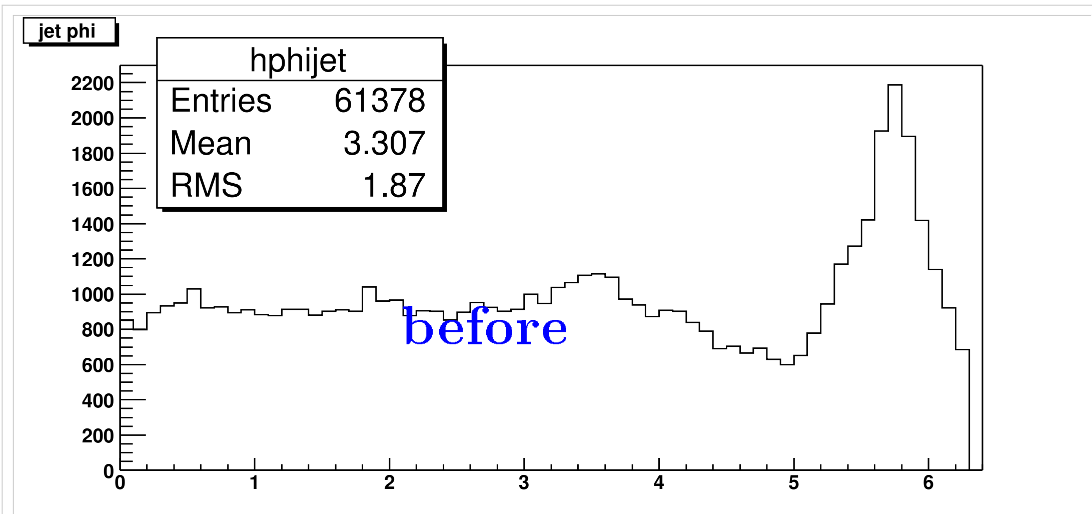
1. Read thumbnail files
2. Make a new CalDataChunk after fixing all known problems:
   - Shared Energy problem
   - Tower 2 problem
   - ICD weights
3. Remake primary vertex
4. Fix charged particle extrapolation to CPS and association to vertices
5. Remake muon, taus, jets, missing ET, and em objects
6. Make new ThumbNailChunk
7. write new thumbnail file

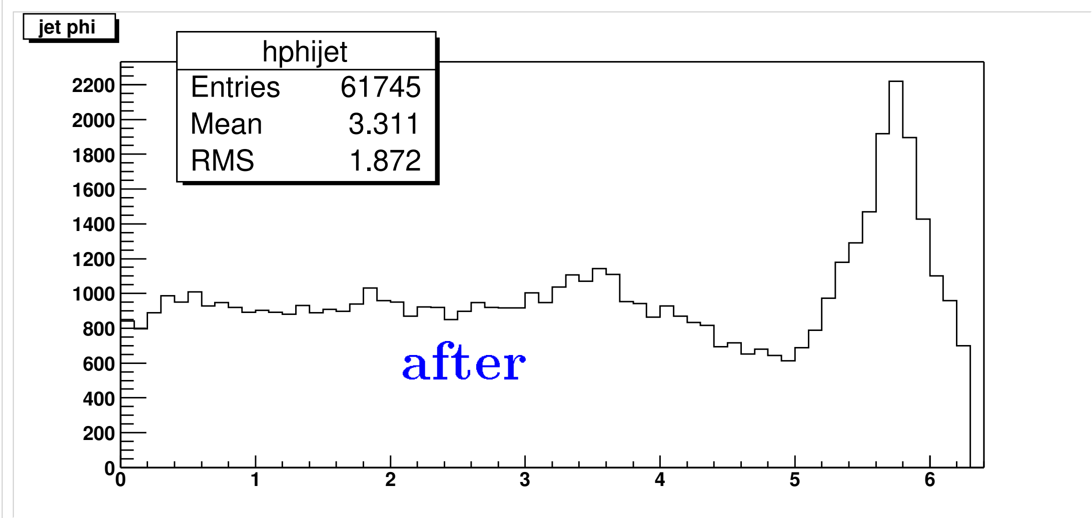
Program based on p14 code.
First production release p14.fixp13tmb.00

Plots based on some single μ NP files. Unless indicated otherwise.

Jet ϕ distributions (JCCA)

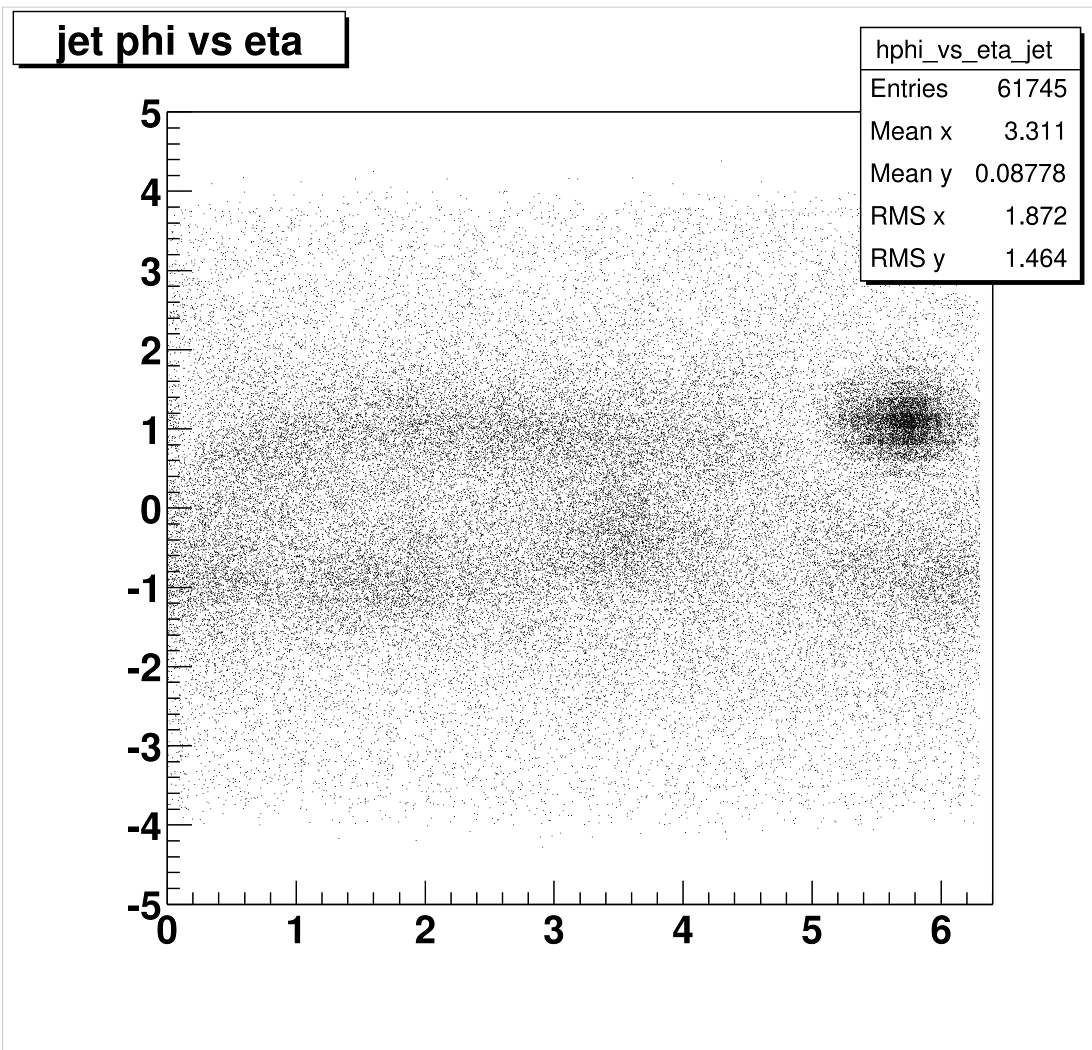
runs 175343-175355





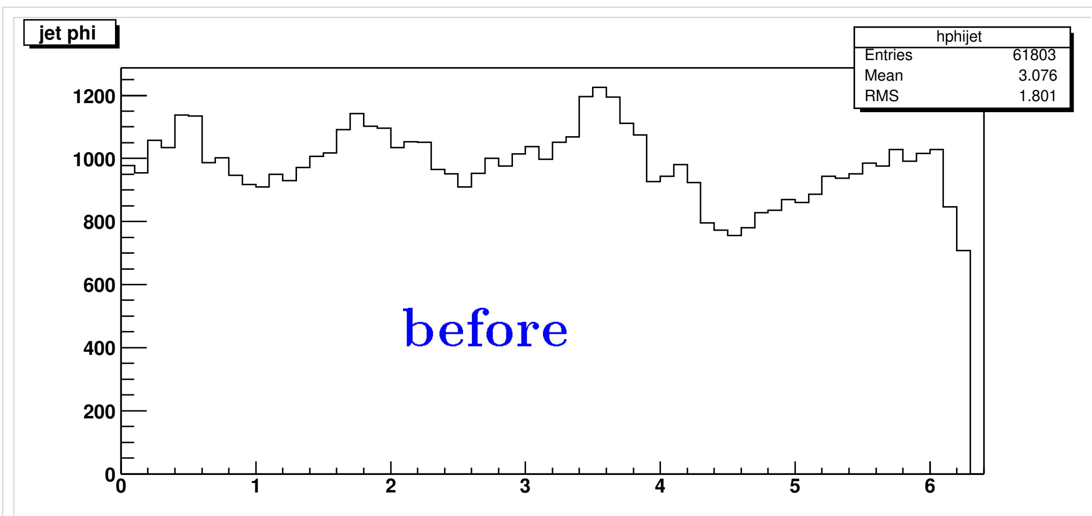
Jet ϕ vs η

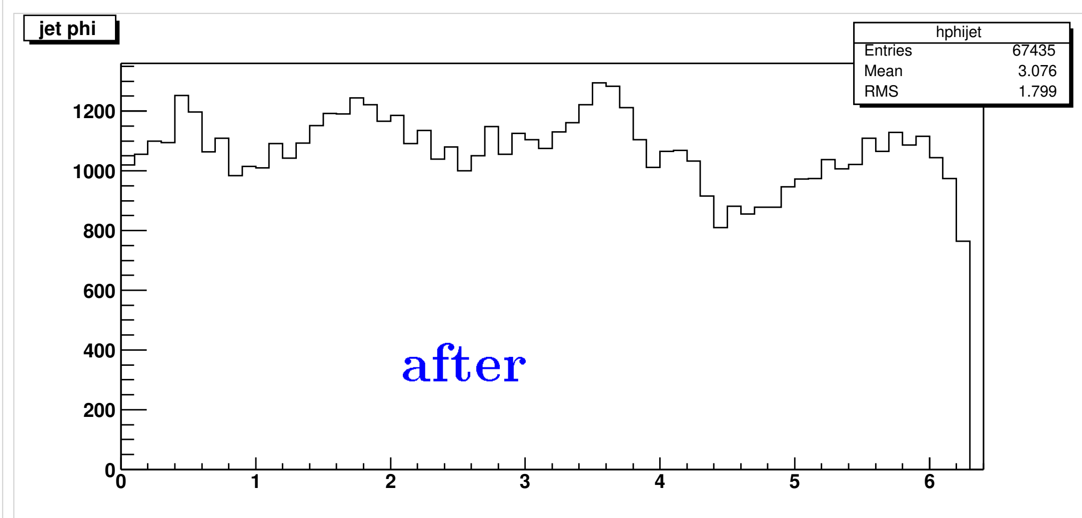
runs 175343-175355



Jet ϕ distributions (JCCA)

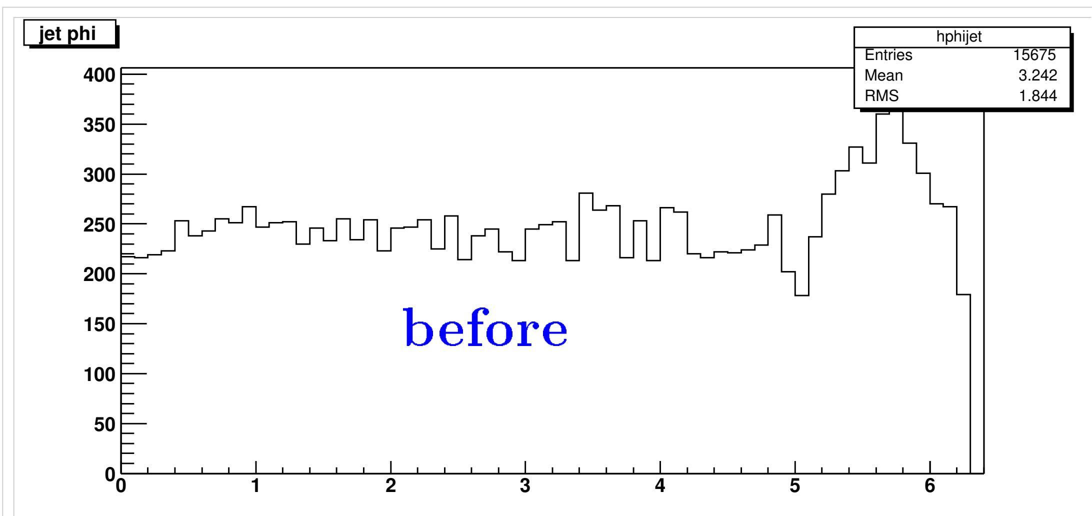
runs 175795-175796

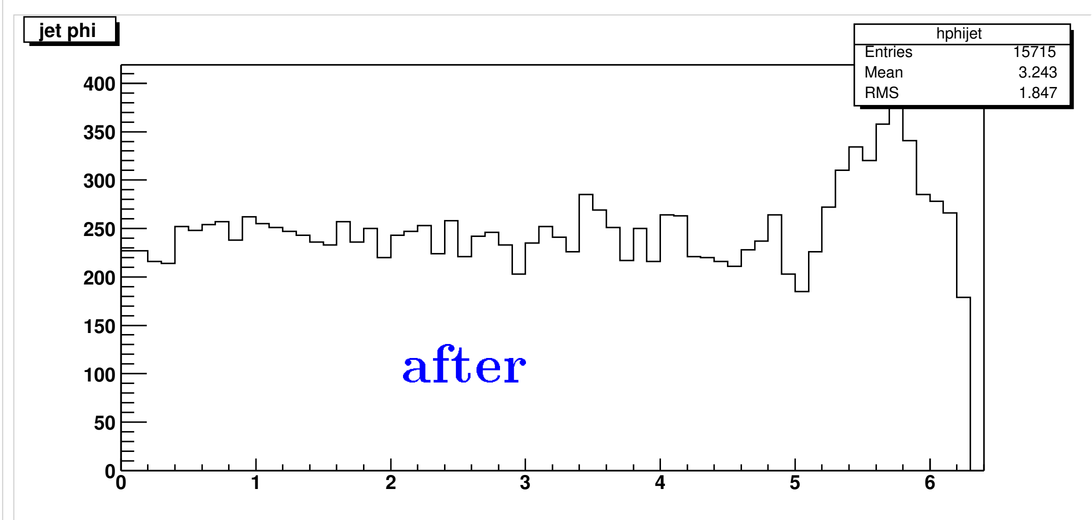




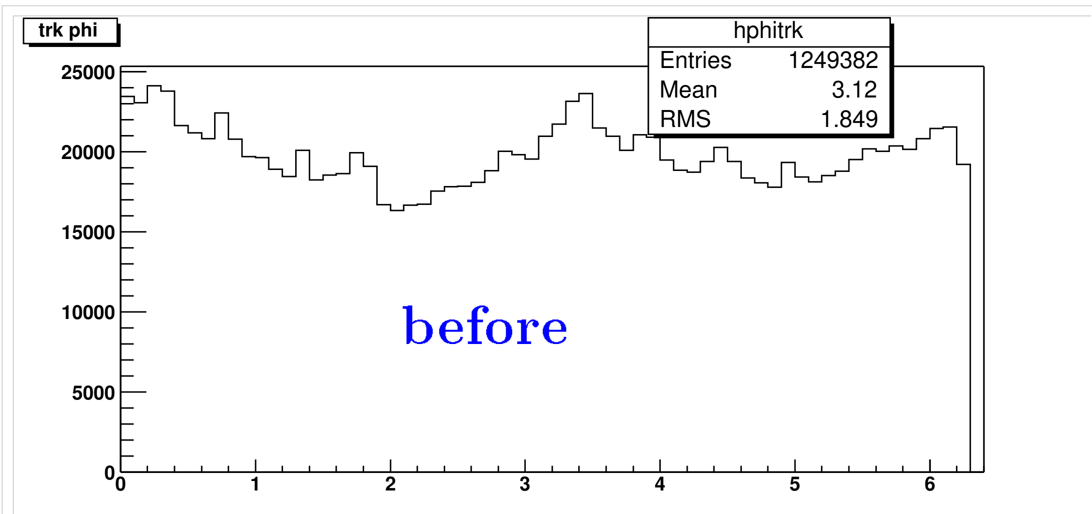
Jet ϕ distributions (JCCA)

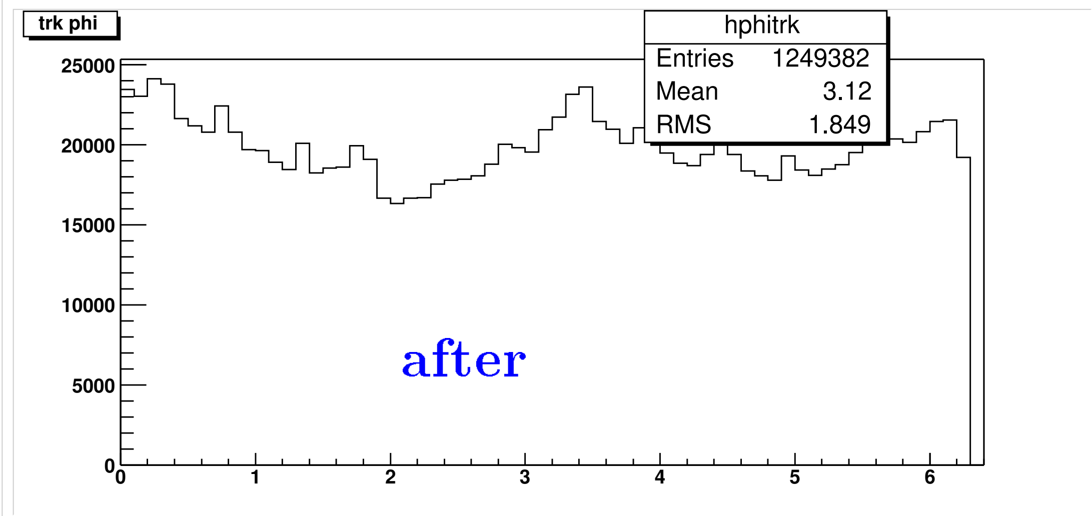
runs 175343-175355
2em file





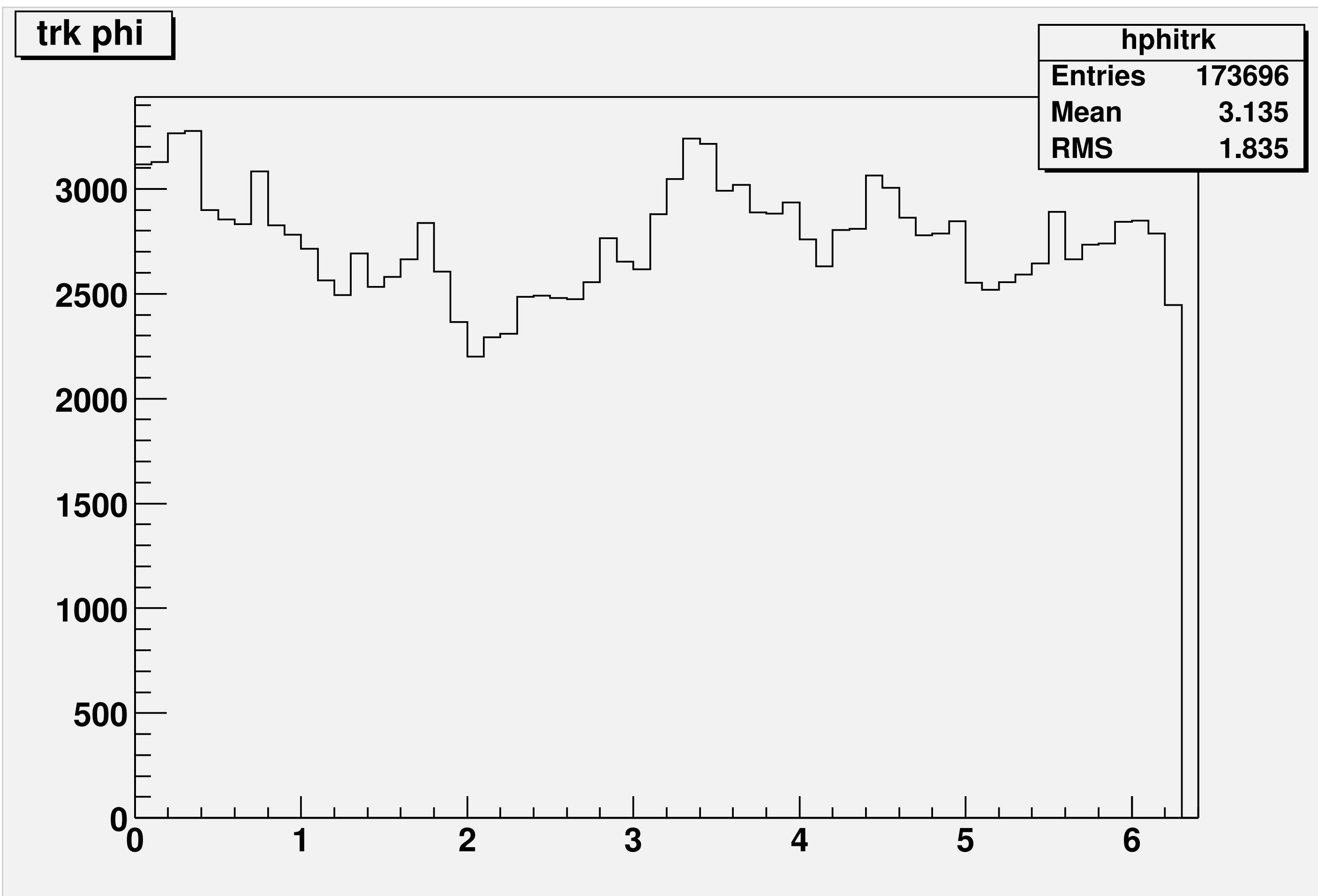
track ϕ distributions



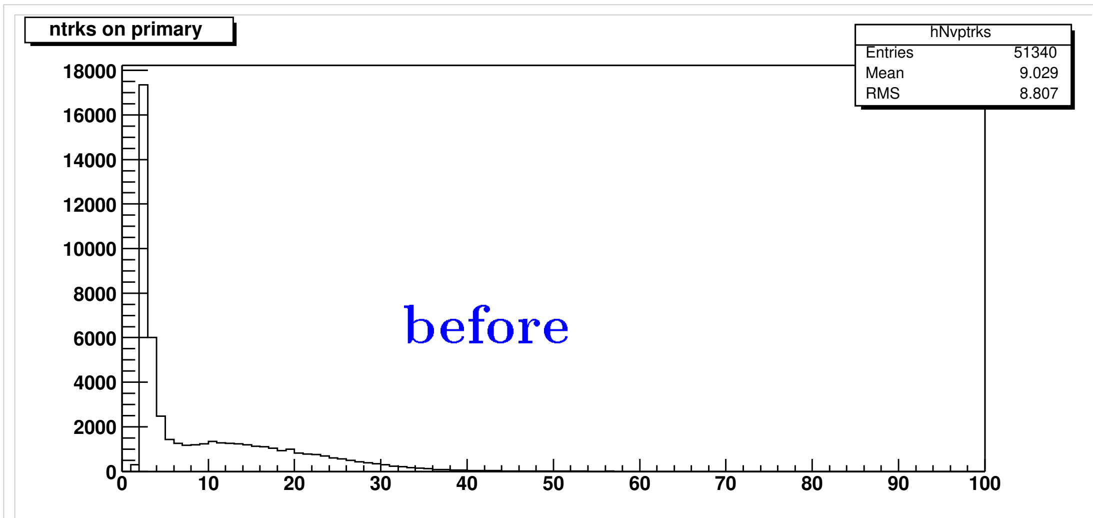


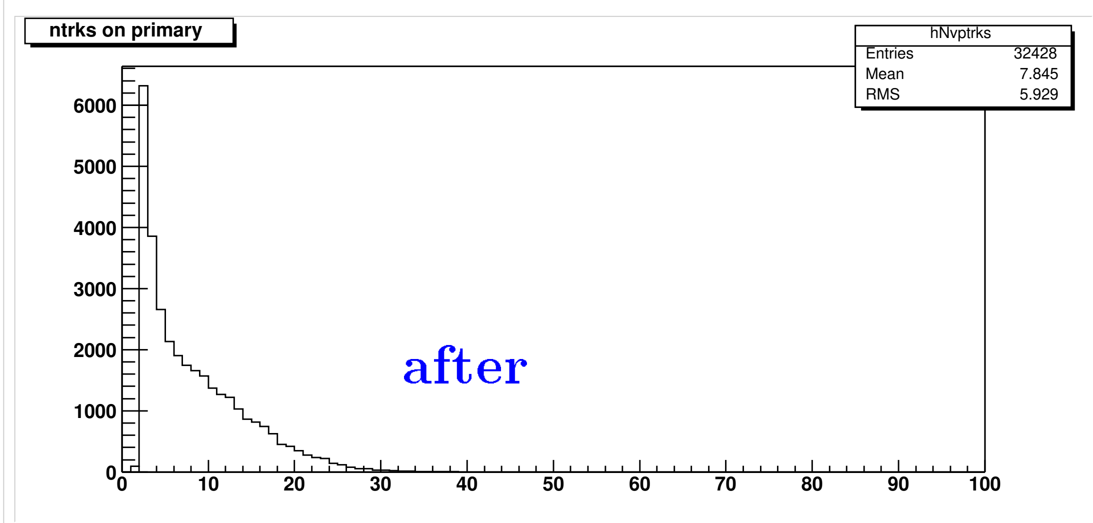
track ϕ distributions

2em file

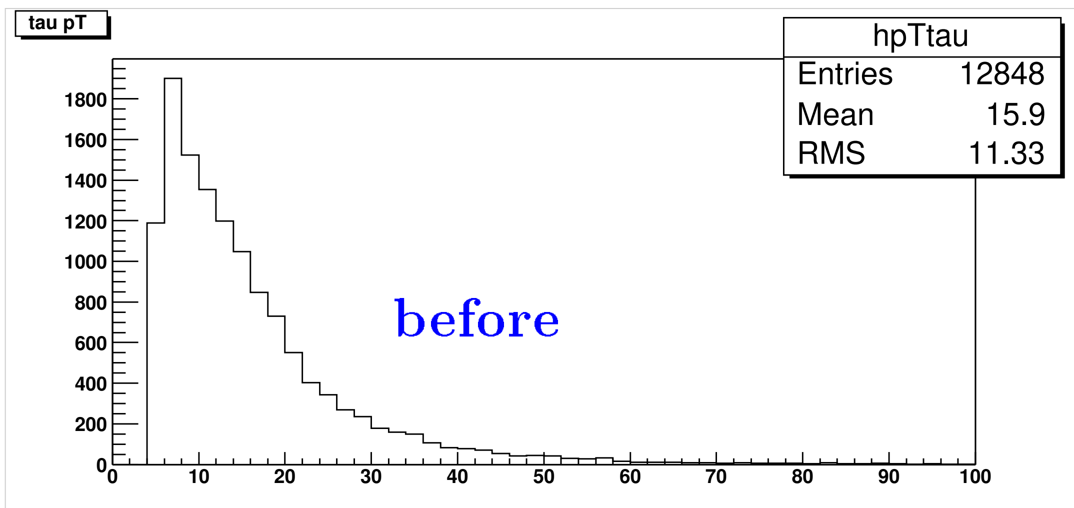


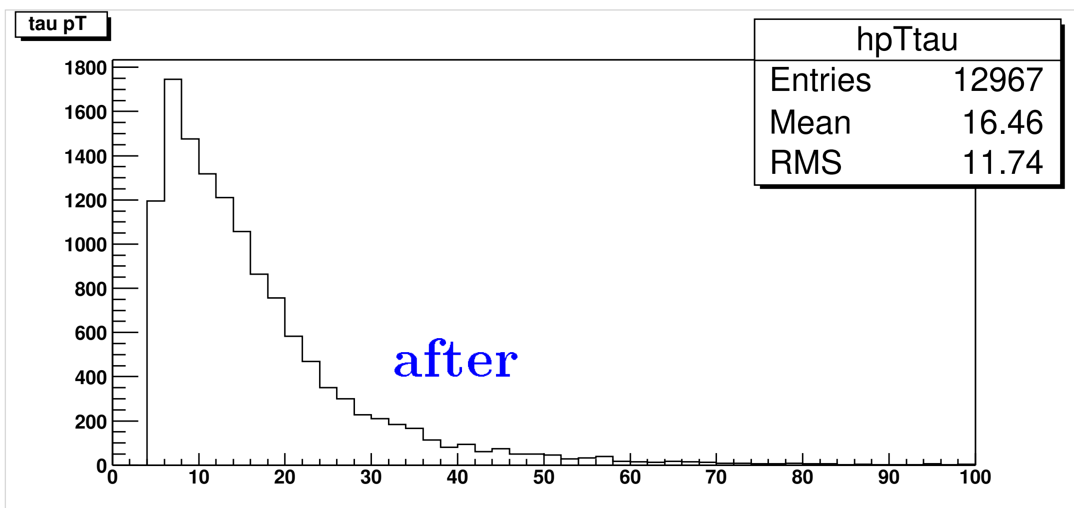
No. of tracks on primary



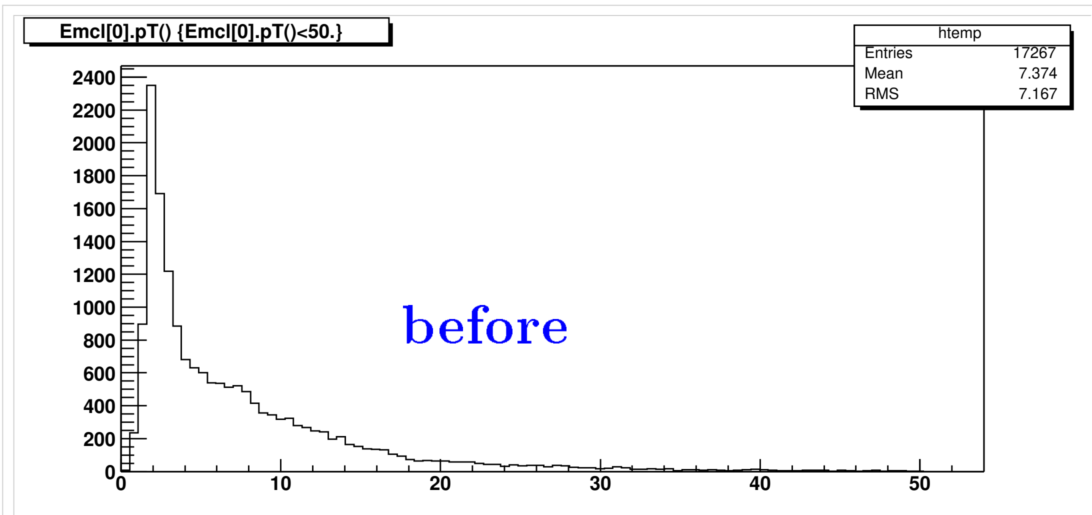


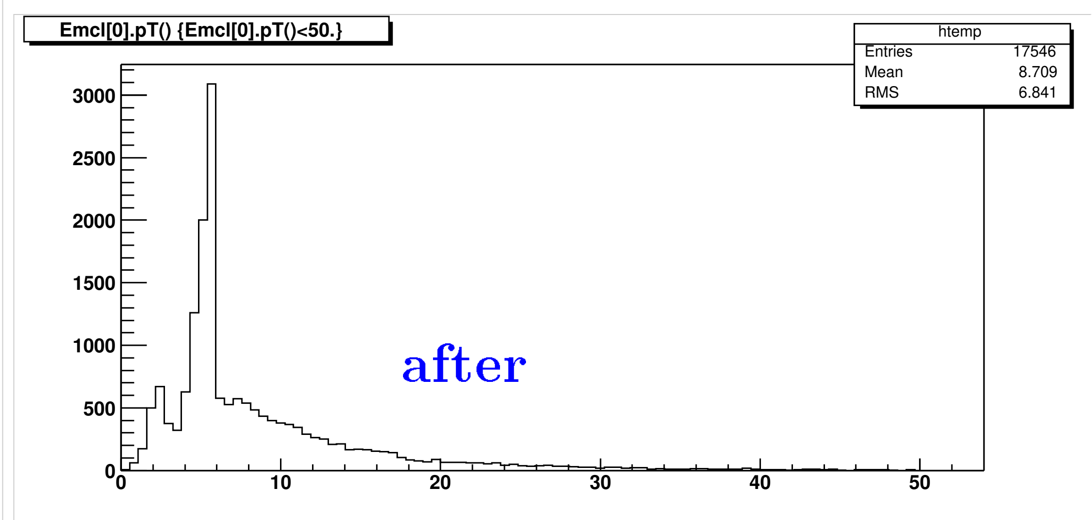
τ p_T


tau pT
hpTtau
Entries 12848
Mean 15.9
RMS 11.33
before

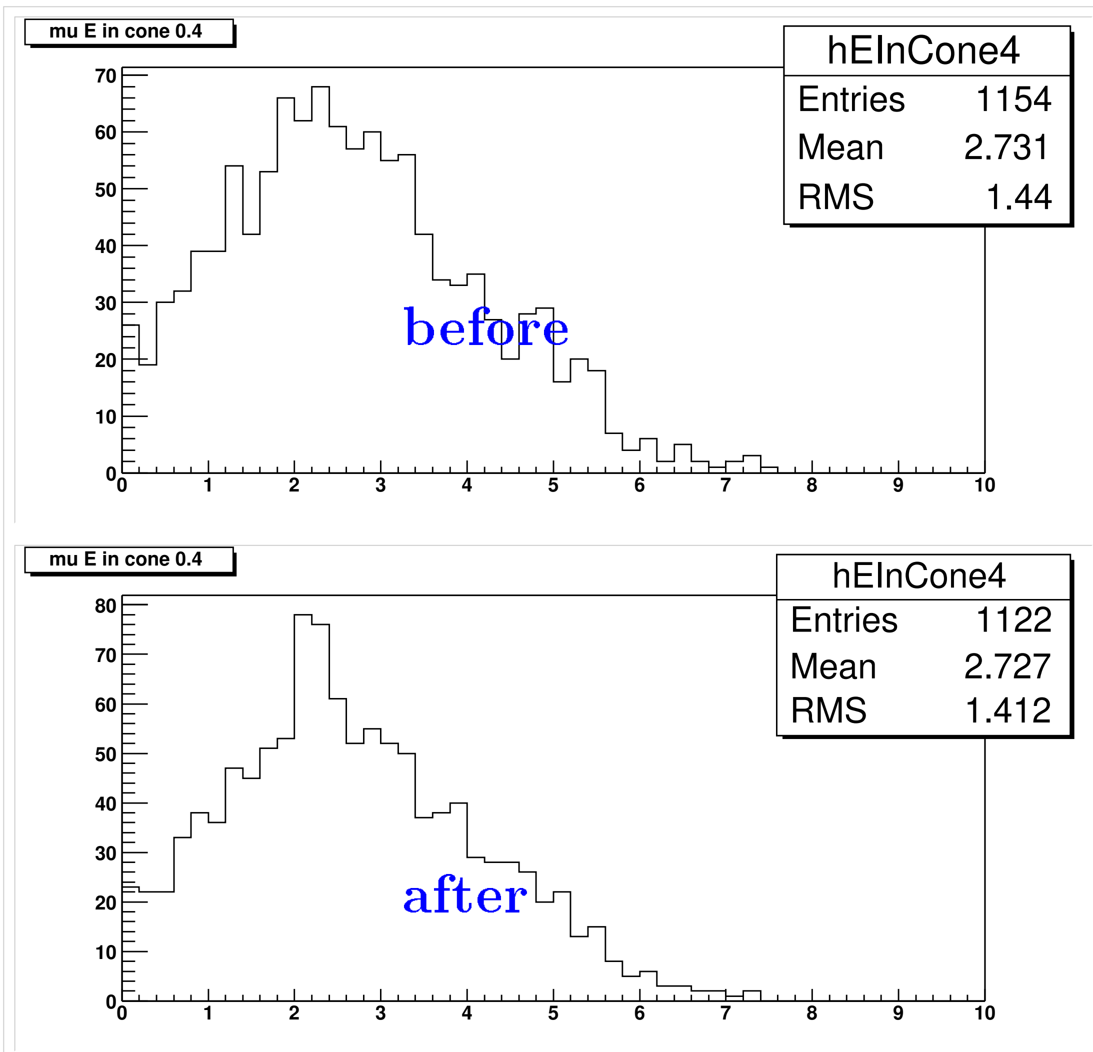

tau pT
hpTtau
Entries 12967
Mean 16.46
RMS 11.74
after

em p_T

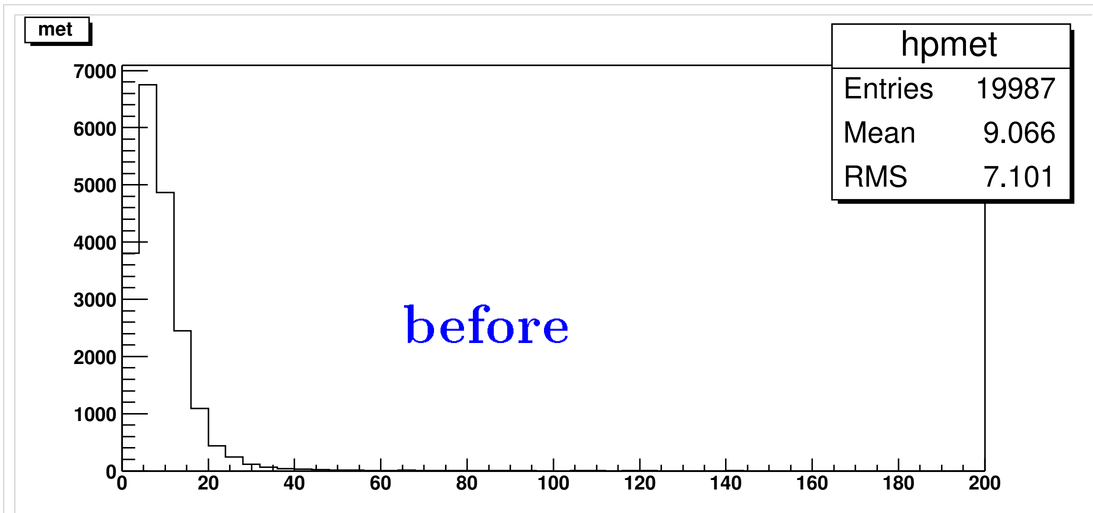

Emcl[0].pT() {Emcl[0].pT()<50.}
htemp
Entries 17267
Mean 7.374
RMS 7.167
before
0
200
400
600
800
1000
1200
1400
1600
1800
2000
2200
2400
0
10
20
30
40
50

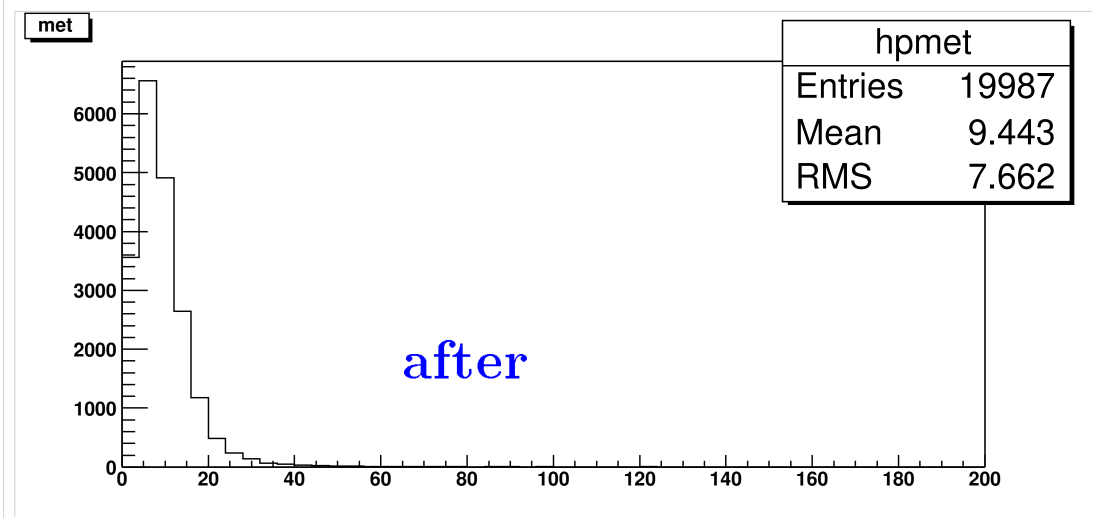

Emcl[0].pT() {Emcl[0].pT()<50.}
htemp
Entries 17546
Mean 8.709
RMS 6.841
after
0
500
1000
1500
2000
2500
3000
0
10
20
30
40
50

μ E in cone 0.4



Missing ET


met
hpmet
Entries 19987
Mean 9.066
RMS 7.101
before


met
hpmet
Entries 19987
Mean 9.443
RMS 7.662
after

Other tests I know about:

Junjie has checked $Z \rightarrow ee$ events. No problems:
`/work/toll-clued0/junjie/tmbfixer.ps`

Yuri checked τ's and tracks. No problems.

Gordon Watts checked revertexing. No problems.
New PV resolution checked by R. v. Kooten and A. Kryemadhi:
`http://hep.physics.indiana.edu/~rickv/d0bphys/dca.ps`

B-physics group looked at provided trees before and after. No problems.