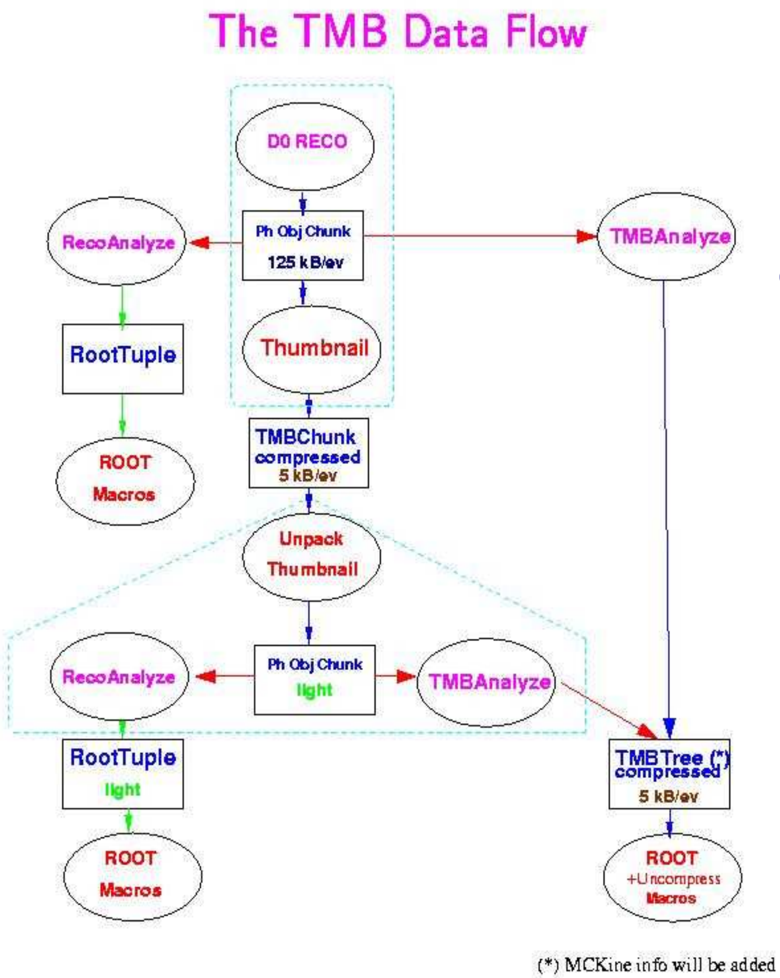
First look at Muonid branch in ThumbNail



dimuon−sample (Z candidates)

reReco with
p12.01.00 (default)
p12.01.00 (modified MuTmbObj code)

muo_analyze to create ntuples
MUONID branch

branches from different ntuples
are merged

Muonid TMB – possible sources of errors

PACKING

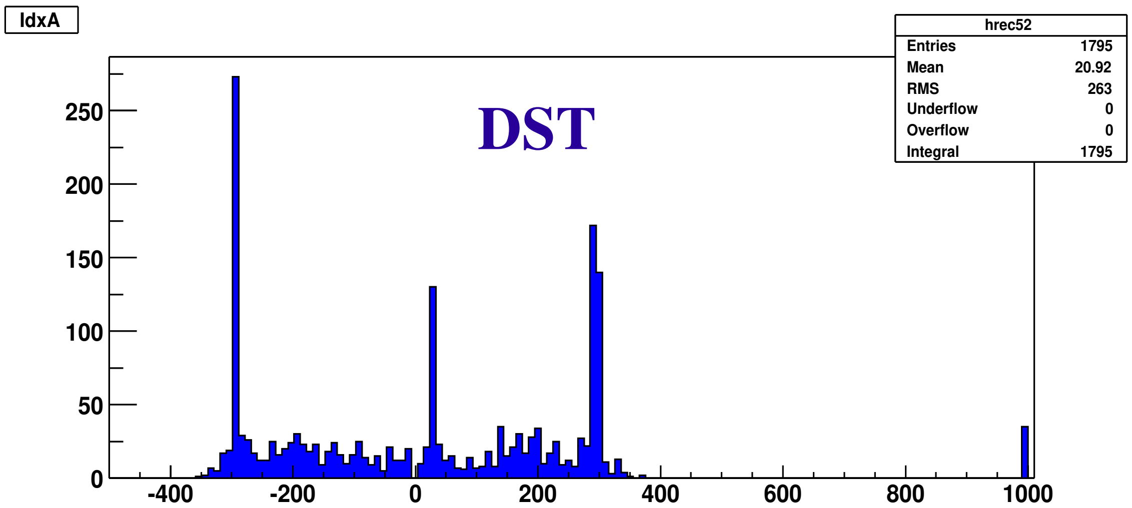
scale, number of bits, rounding / truncating

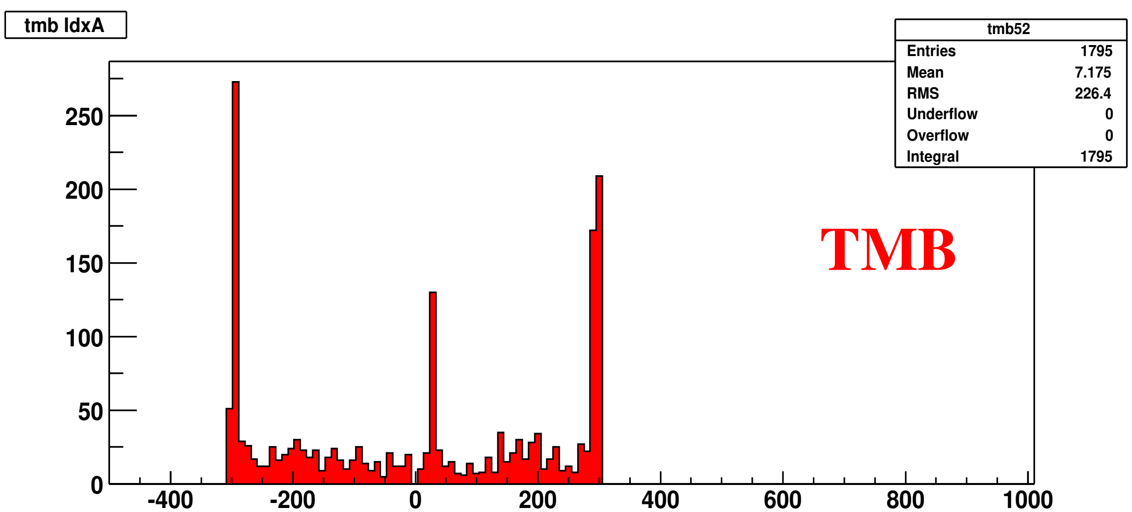
IMPLEMENTATION

some variables are not defined in MuTmbObj
some variables are not yet filled
some variables are not yet correctly filled

errors might come also from other code than MuTmbObj

DOOM Packing

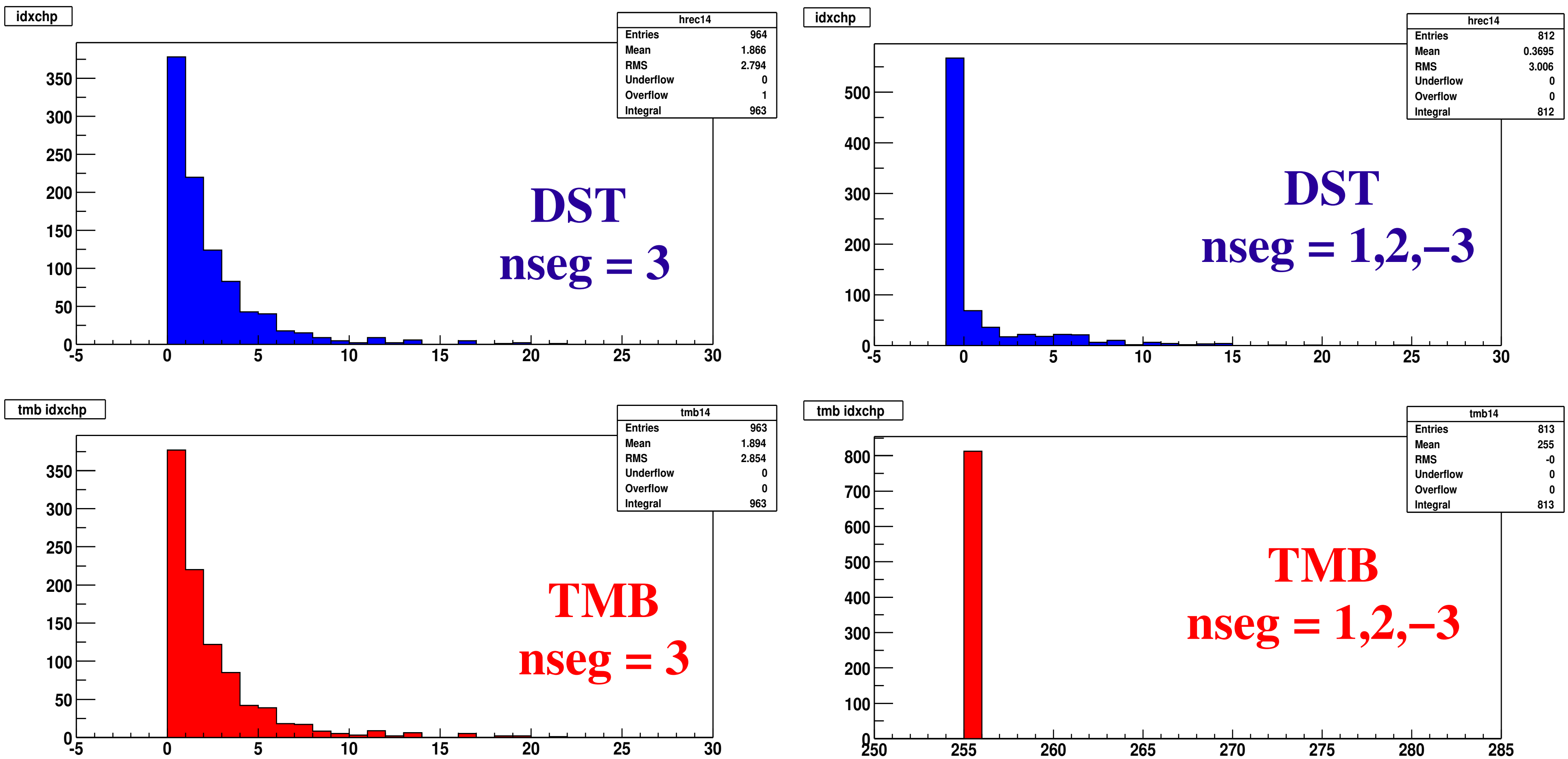




idxA = x coord. of center point of A–segment (cm)

Problem with packing:
- scale of 300 is small
- nbits = 16

idxchp = index of matching ChargedParticle

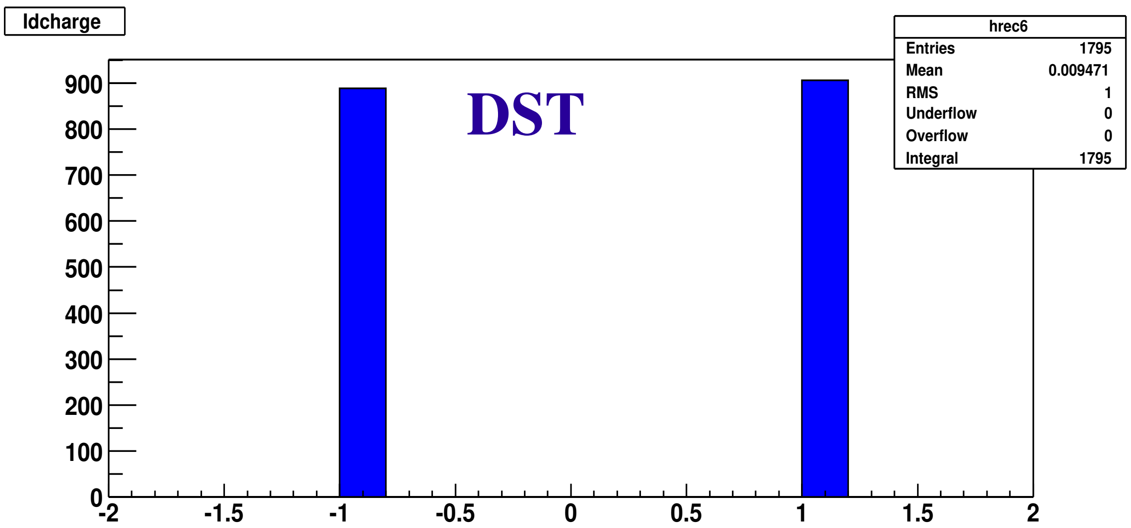


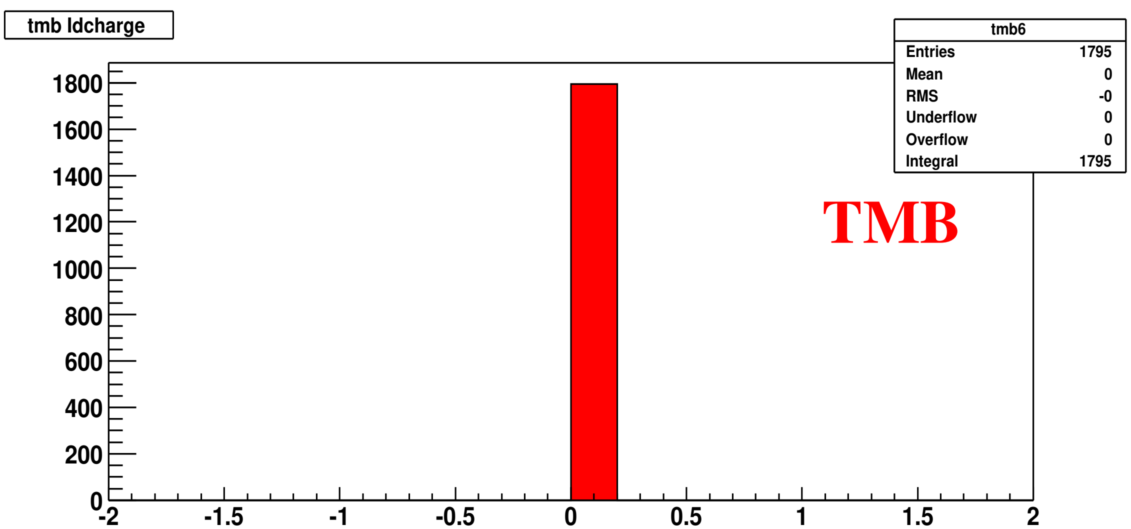
Muonid if filled from diff chunks:

for DST: MuoCentralmatchChunk

for TMB: MuonParticleChunk

Implementation for muon charge before



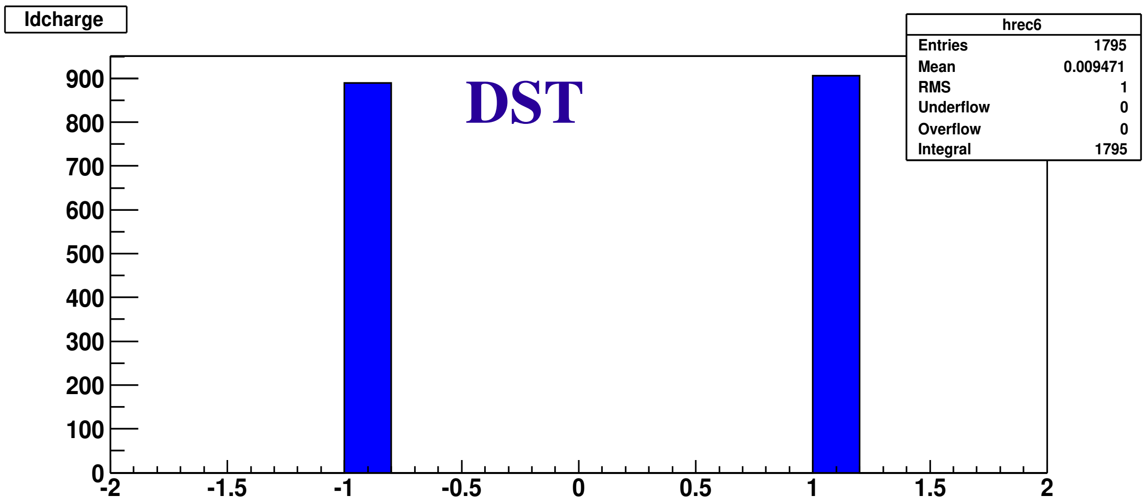


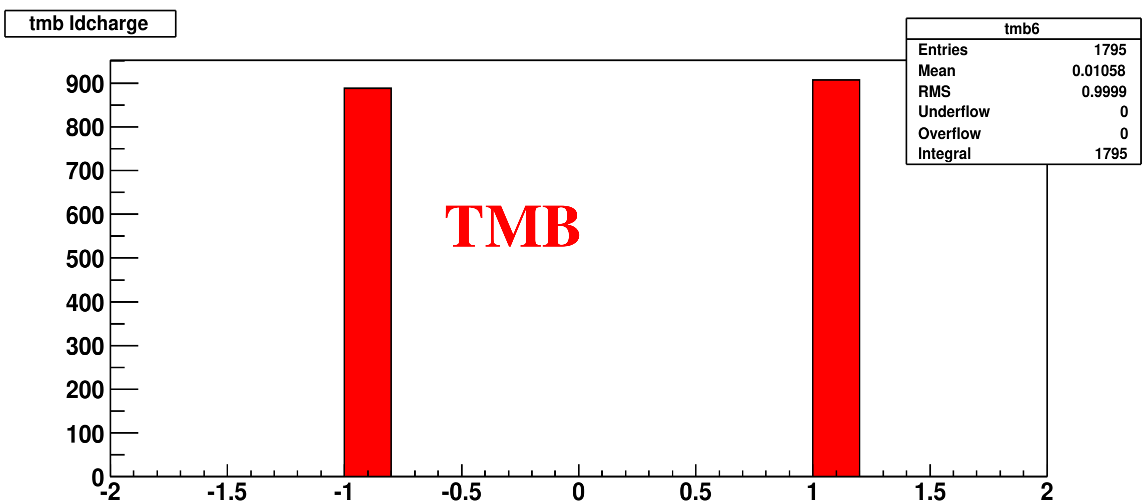
ldcharge = Charge of muon

for thumbnail it remains on the default value

ldcharge = 0

Implementation of muon charge now

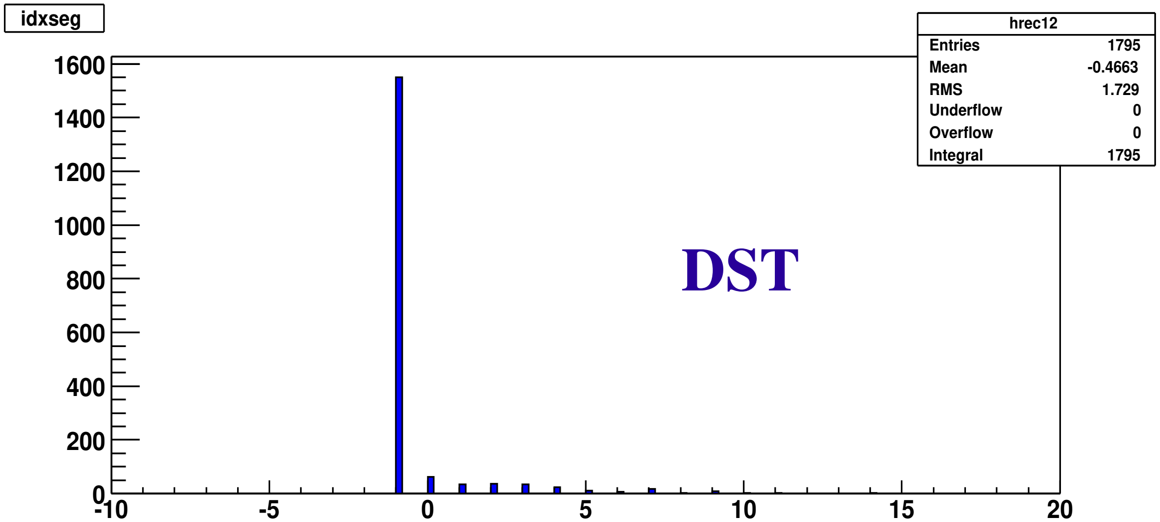


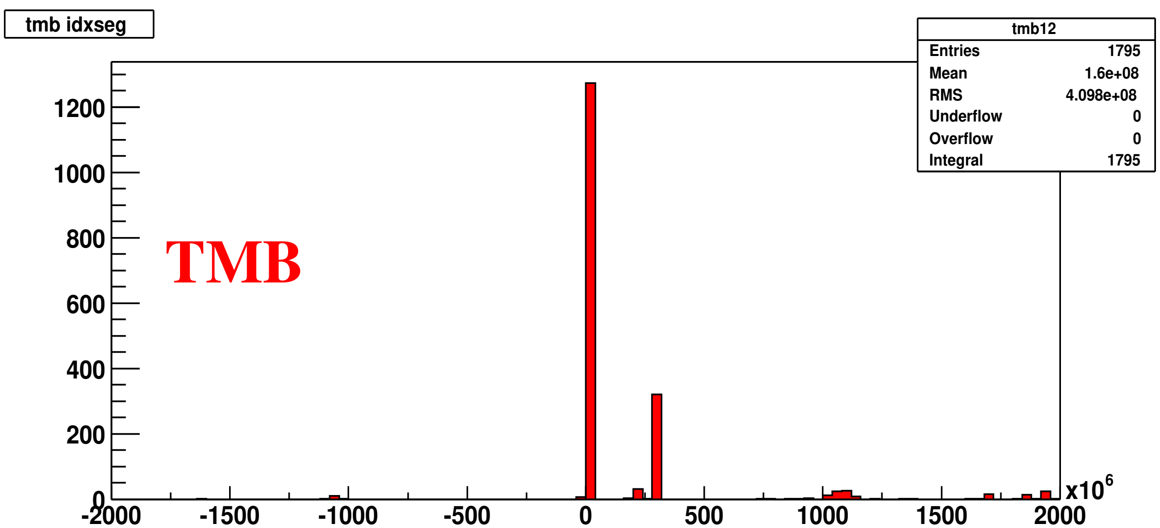


Idcharge = Charge of muon

bug is fixed using qopt

Implementation

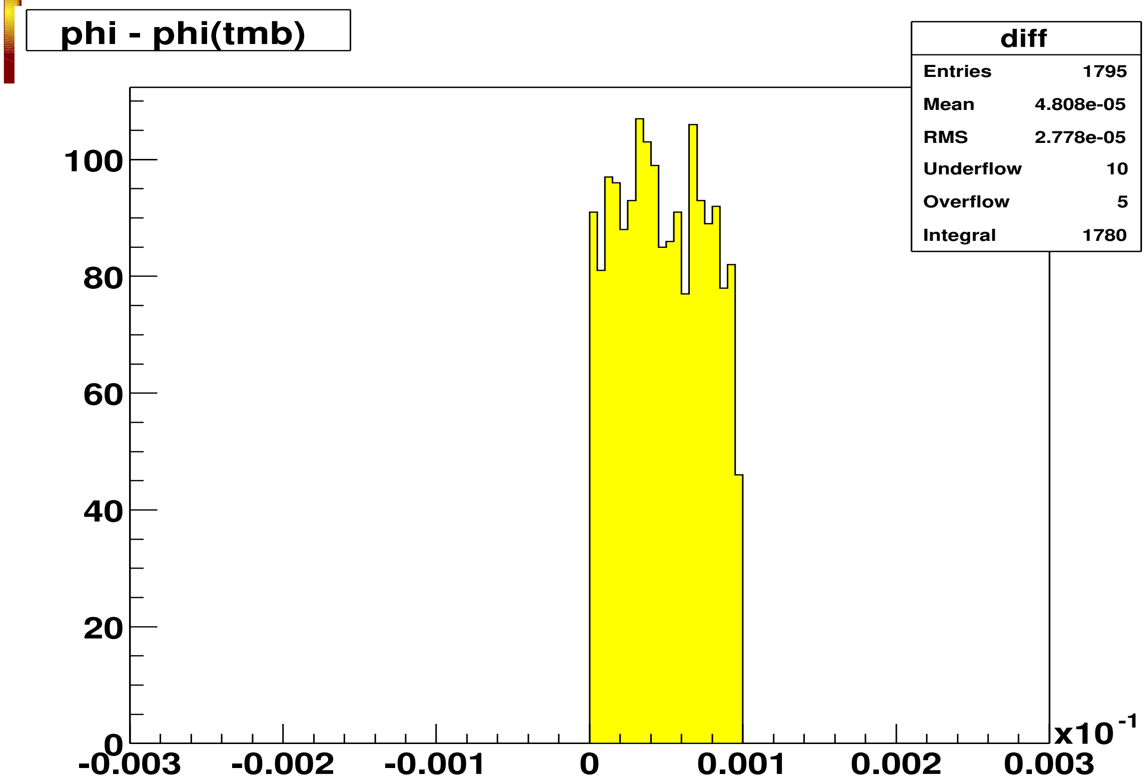




idxseg = index of segment to define the MuonParticle

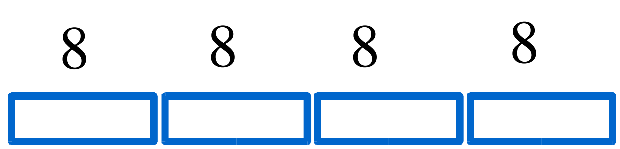
Implementation:
- for DST:
  - TrackChunk
- for TMB:
  - variable is not defined
  - should be added to tmb

Packing in ThumbNail



rounding not yet available in p12.01.00

How is the packing in thumbnail?
DOOM – packing in multiples of 32 ?
Do we loose bits because of the packing?



Number of bits in Muonid

from MuTmbObj:

average number of muon particle in event = 0.36

number of bytes per event = 32

proposal

muon hits should be included in thumbnail:

average number of hits in event = 20 (MDT + PDT + SCT)

number of bytes per event = 125

Summary and Outlook

first look at Muonid branch

there are still some bugsand problems, will be fixed
muon hits should be included – will take some time and space

need information for optimised packing