Subject: Reading the TTree cbmsim with R3B member functions
Posted by C. A. Douma on Fri, 18 Sep 2015 08:28:09 GMT
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Dear all,

I am a new R3Broot user. until now I have been reading the cbmsim tree in the following way:

```
TFile* f = new TFile("r3bsim.root","read");
TTree* t;
f->GetObject("cbmsim",t);
TLeaf* LandPoint_fLightYield = cbmsim->FindLeaf("LandPoint.fLightYield");
Long64_t nEvents = t->GetEntries();
Long64_t nBytes;
TH1D* h = new TH1D("h","h",100,0.0,1.0);
Int_t EventSize;
Double_t light;
for (Long64_t Entry = 0; Entry<nEvents; ++Entry)
{
  nBytes = t->GetEntry(Entry);
  EventSize = LandPoint_fLightYield->GetNdata();

  for (Int_t k = 0; k<EventSize; ++k)
  {
     light = LandPoint_fLightYield->GetValue(k);
     h->Fill("light"0;
  }
}
h->Draw();
```

I would like to change this code into using the special R3B member functions:

```
TFile* f = new TFile("r3bsim.root","read");
TTree* t;
f->GetObject("cbmsim",t);
TClonesArray* LandPoints;
LandPoints = new TClonesArray("R3BLandPoint");
R3BLandPoint* Single_LandPoint;
Long64_t nEvents = t->GetEntries();
Long64_t nBytes;
TH1D* h_new = new TH1D("h_new","h_new",100,0.0,1.0);
Int_t EventSize;
Double_t light;
for (Long64_t Entry = 0; Entry<nEvents; ++Entry)
{
  nBytes = t->GetEntry(Entry);
  EventSize = LandPoints->GetEntries();

  for (Int_t k = 0; k<EventSize; ++k)
  {
     Single_LandPoint = (R3BLandPoint*) LandPoints->At(k);
     light = Single_LandPoint->GetLightYield();
```

```
      h_new->Fill("light"0;
   }
}
h_new->Draw();
```

But the two pieces of code do not give the same histogram. (I did play with the boundaries and bin-size of the histogram, this did not solve the problem).
The histogram h_new contains far less entries. Is there anyone who can help me?

Christiaan Douma.
PhD student at KVI-CART
University of Groningen, Netherlands
Supervisor: prof. dr. N. Kalantar

Subject: Re: Reading the TTree cbmsim with R3B member functions
Posted by Dmytro Kresan on Fri, 18 Sep 2015 10:07:51 GMT
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Dear Christiaan,

next week I will use the code you have posted here to test and debug the issue with TLeaf. Will let you know about the result.

Best regards,
Dima

Subject: Re: Reading the TTree cbmsim with R3B member functions
Posted by Dmytro Kresan on Mon, 21 Sep 2015 08:46:08 GMT
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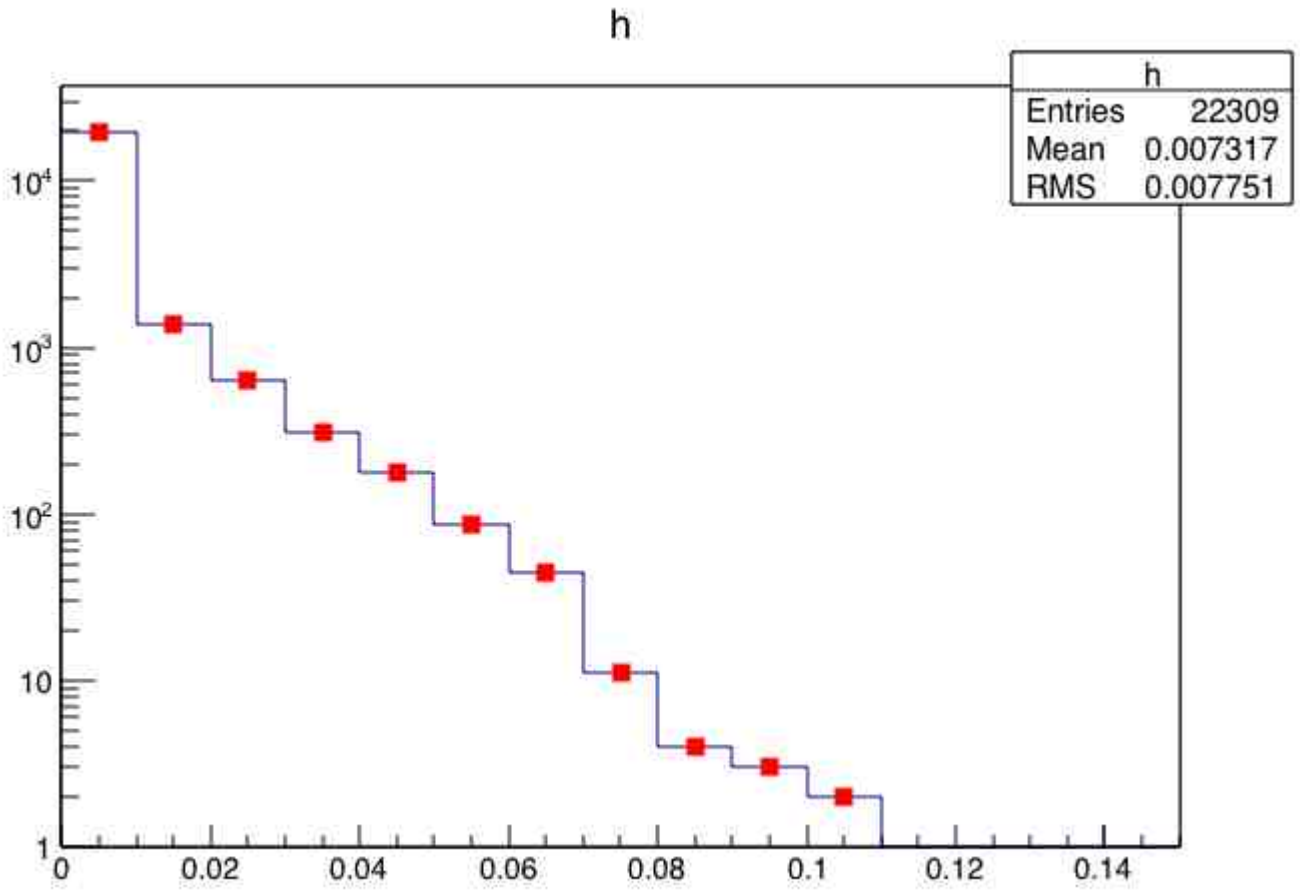
Dear Christiaan,

I have tested your sample code with NeuLAND simulated data using both ROOT 5 and 6. I can not reproduce your problem. For both ways of accessing the data: either via TLeaf or TClonesArray the histograms match perfectly - plot is attached. Please revise your code: make an intermediate histogram filling, intermediate output of array sizes you use (event-by-event).

Best regards,
Dima

File Attachments

1) c1.jpg, downloaded 1528 times


h
h
Entries 22309
Mean 0.007317
RMS 0.007751
10^4
10^3
10^2
10
1
0
0.02
0.04
0.06
0.08
0.1
0.12
0.14