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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",light);
    }
}
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?

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