Subject: Re: Different results for same information extracted in different ways
Posted by Mamen on Fri, 07 Nov 2014 13:59:07 GMT
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Thanks a lot Klaus,

Looping over Nbins+2 in the histogram created using "->Project();" helps me getting the same number of events than using ->GetEntries();

However I still need to understand why I don't get the same number of entries looping over the tree or doing a Project.
I checked out the values that were being filled in the tree like that:

```
 if (kk % 10000 == 0 && kk != 0)
          {
            cout<<"*** FILLING *** "<< kk << " : "<< cosThetaP << "\t"<< Pz << " / "
<<(sqrt(pow(Px, 2)+pow(Py,2)+pow(Pz,2)))<< endl;
          }

kk++;
```

(cosThetaP, Pz, Px and Py are defined from the branch addressed variables, and cosThetaP is the variable I want at the end fill in the Histogram)
and I saw that costThetaP, as well as Pz and sqrt(...) were showing sometimes "-nan" value.

So I added a variable that counted how many times I was getting nan:

```
   if (isnan(cosThetaP))
            {
              fail++;
               //cout << "cosThe is nan"<<endl;
            }
```

However, the number of entries still don't match.

In addition I have also got the number of entries from the histogram filled looping over the Tree, summing up over Nbins, summing up over Nbins+2 and using GetEntries(), and the results are very strange.

For different files I get:

File	Reco->GetEntries()	Sum=Sum+Reco->GetBinContent(i) from bin=1 to bin=Nbins	Sum=Sum+Reco->GetBinContent(i) from bin=0 to bin=Nbins+1	Nr. -nan events value of fail
1	493075	564152	487270	21476
2	379395	510432	465690	14101

3	646731	373536	0	11467
4	505865	380024	0	22111

==========

Before filling the histogram looping over the tree I've initialized them using

```
for (int b=0; b<Nbins+2; b++)
    {
      Eff->SetBinContent(b, 0);
      Eff->SetBinError(b, 0);

      Reco->SetBinContent(b, 0);
      Reco->SetBinError(b, 0);
    }
```

Can the over/underflow bins have negative values??? even after initializing them to 0 values???
