Subject: Differences between Histo and Ntuple
Posted by Mamen on Wed, 07 May 2014 14:11:24 GMT
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Dear all,

I'm trying to learn how to save data into a root file using both a histogram or an ntuple.
For the histogram I get reasonable plots, but for the ntuple I get strange events/particles plotted at -1000.
My code looks like follows:

```
TH1F *eppx = new TH1F ("eppx", "eppx (All)", 200, -2000, 5000.);
(.../...)
RhoTuple *ntp  = new RhoTuple("RecoTuple","Reco_analysis");
(.../...)
PndAnalysis* theAnalysis = new PndAnalysis();
if (nevts==0) nevts= theAnalysis->GetEntries();
// *** RhoCandLists for the analysis
RhoCandList eplus;
(.../...)
while (theAnalysis->GetEvent() && i++<nevts)
 {
  if ((i%100)==0) cout<<"evt " << i << endl;
  // *** Select with no PID info ('All'); type and mass are set
  theAnalysis->FillList(chrg,    "Charged");
  theAnalysis->FillList(eplus,  "ElectronAllPlus");
(.../...)

 for (j=0;j<eplus.GetLength();++j)
  {
   eppx->Fill(eplus[j]->Px());
   ntp->Column("eppx",          (Float_t) eplus[j]->Px(),              -999.0f);
   ntp->DumpData();
              }
(.../...)
}

out->cd();
eppx->Write();
out->Save();
ntp->GetInternalTree()->Write();
out->Close();
```

However, I get strange results when I open the output rootfile (see uploaded files).
Am I doing something wrong? Does somebody know where these events at -1000 in the ntuple saved data come from?
Thanks a lot in advance!

Best regards,

Mamen

File Attachments
1) PloteppxAll_1.eps, downloaded 622 times
2) PloteppxAll_2.eps, downloaded 652 times
3) PloteppxAll_tuple.eps, downloaded 620 times

Subject: Re: Differences between Histo and Ntuple
Posted by StefanoSpataro on Wed, 07 May 2014 15:37:53 GMT
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In theory the ntuple Write should come before the file Save. Try to invert them,

Subject: Re: Differences between Histo and Ntuple
Posted by Klaus Götzen on Wed, 07 May 2014 17:29:06 GMT
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Hi Mamen,

are the entries at -1000 or at -999? Because you see, that the default value of the column is -999.0:
ntp->Column("eppx", (Float_t) eplus[j]->Px(), -999.0f);

In case you call ntp->DumpData() without filling in a value after the last DumpData, the default value will be stored. So you might check whether sometimes (perhaps somewhere else) ntp->DumpData() is called (accidently).

Best,
Klaus

Subject: Re: Differences between Histo and Ntuple
Posted by Mamen on Thu, 08 May 2014 15:25:26 GMT
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Hi again,

Thanks to both of you... after some time spent today I found out that this is not a bug... As Klaus said, it corresponds to the default value... So for instance, if I make a loop over the positive-candidates, and another over the negative-candidates and store info from both loops

in an ntuple (for example px_pos and px_neg), it can be that for some common event-number, there is no negative entry for the corresponding positive entry, then the default value is filled in the negative-information branch (evt=X; px_pos=Value1; px_neg=-999.0(default_value)).
This bugs me a bit, because afterwards I would need to apply an extra cut "var>-999" to all plots... Is there any way to avoid that? I don't remember a behavior like that in the old Babar-like framework...

Thanks again for your help!
Cheers,

Mamen
