
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 (nevt==0) nevt= theAnalysis->GetEntries();
// *** RhoCandLists for the analysis
RhoCandList eplus;
(.../...)
while (theAnalysis->GetEvent() && i++<nevt)
{
  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 571 times
 - 2) [PloteppxAll_2.eps](#), downloaded 604 times
 - 3) [PloteppxAll_tuple.eps](#), downloaded 571 times
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Subject: Re: Differences between Histo and Ntuple
Posted by [Stefano Spataro](#) 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 (accidentally).

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
