Subject: McTruthMatch problems
Posted by Elisabetta Prencipe (2) on Thu, 05 Jun 2014 15:41:54 GMT
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Dear all,

I have a problem with the McTruth match. As preface, I have to say that it works pretty well in the standard trunk (25180) which I am currently using.
I substituted genfit with genfit2. If I try to run standard macros (sim-, digi-, reco-, pid-) evertyhing looks working smooth: variables are filled.

I run a standard analysis macro, making use of rho classes (e.g. ana_complete.C), and I modified it following the example /macro/scrut/ana_jpsi.C.
ntp1 (reco quantities) is filled properly.
nmc is filled properly.

The problems occur when I try to loop over the rho candidates, and ask the Mc true values in ntp1. For example:

```
  RhoCandidate *truth = jpsi[j]->GetMcTruth();
  TLorentzVector lv;
  if (truth) lv = truth->P4();
  qa.qaP4("true_jpsi_", lv, ntp1);

  ntp1->DumpData();
```

all variables labeled as true_jpsi_* look spikes centered in zero (but same number of entries as for reco variables).
Indeed, in the mc block:

```
  theAnalysis->FillList(mclist, "McTruth");

  nmc->Column("ev", (Int_t) i);
  qa.qaMcList("",   mclist, nmc);
  nmc->DumpData();
```

variables are filled properly.
When running the standard test macros, I see often the message:

-W- PndMCTrackAssociator::Exec: Not identified Detector ID
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does it imply that the Mc truth association fails, here?

Even more tricky: when I try to run the fast sim, I don't get this problem at all. Of course, the fast sim is not using "kalman algorithms", except for one method in the PidCorrelator. So, I am pretty sure that I did not face properly something related to genfit2 inside pandaroot, for the

MCtruth association. It is not clear to me how to debug this, and I need your help. Do you have any idea at which level the true association is going wrong? did anybody experienced before something like that?

thank you in advance for your help,

Elisabetta