
Subject: [FIXED] Not set McMotherIdx
Posted by [Andreas Pitka](#) on Tue, 14 May 2013 16:13:41 GMT
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Hi,

the McMotherIdx`s seem not to be set in general (they are always -1).

I was using the apr13 release.

Best regards

Andreas

Subject: Re: Not set McMotherIdx
Posted by [Stefano Spataro](#) on Tue, 14 May 2013 16:25:14 GMT
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Which class and which task?

Subject: Re: Not set McMotherIdx
Posted by [Andreas Pitka](#) on Tue, 14 May 2013 18:00:06 GMT
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I was using the PndEvtGenDirect with `evtGen->SetStoreTree(kTRUE)`.

Its reproducible via:

```
theAnalysis->FillList(MC_Truth,"McTruth");  
  
for (int j=0;j<MC_Truth.GetLength();j++)  
    cout<<MC_Truth[j].GetMcMotherIdx()<<endl;
```

It would be nice if its set, since PndMcTruthMatch uses the MotherIdx a lot.

Subject: Re: Not set McMotherIdx
Posted by [Ralf Kliemt](#) on Wed, 15 May 2013 07:00:13 GMT
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Hi Andreas,

A MC truth candidate has by concept mother and daughters. The MC mother index points to the MC candidate of the current mother. But your MC tracks don't have a MC truth as they already are the MC truth.

In other words: Don't use the MCmatch on the truth list but on a reconstructed candidate list.

Cheers.
Ralf

Subject: Re: Not set McMotherIdx
Posted by [Andreas Pitka](#) on Wed, 15 May 2013 08:26:16 GMT
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PndMcTruthMatch is doing something like the following

```
00075 // check whether the mothers of all daughters are the same
00076 for ( Int_t i=1; i<nd; ++i ) {
00077     Int_t dauidx = c.Daughter ( i )->GetMclIdx();
00078
00079     if ( mct[dauidx].GetMcMotherIdx() != mothidx ) {
00080         if(verbose) Info("PndMcTruthMatch::MctMatch","rejected by not matching mother
ids in daughters");
00081         return false;
00082     }
00083 }
```

where mct is the Monte Carlo RhoCandList. Without the MotherIdx set for the particles in the McTruth RhoCandList the PndMcTruthMatch is totally useless, since "Bool_t PndMcTruthMatch::MctMatch (RhoCandidate& c, RhoCandList& mct, Int_t level, bool verbose)" returns false all the time.

The problem is not getting the McTruth for a final state particle, but knowing for example if a D0 candidate is made of the tracks belonging to the Monte Carlo Daughters.

Subject: Re: Not set McMotherIdx
Posted by [Ralf Kliemt](#) on Thu, 04 Jul 2013 11:25:59 GMT
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Hi.
Issue is fixed within the changes after the apr13 release. The whole MC tree is built, if the information is stored during simulation.

Ralf
