## Subject: Re: Wrong particle in FillList Posted by Simon Reiter on Fri, 16 Aug 2013 20:40:31 GMT

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Oh no,

now I'm more confused than before. The GetMcTruth() seems to be too difficult for me. I simulated 2000 events and used the following code:

```
PndAnalysis* theAnalysis = new PndAnalysis("SttMvdGemGenTrack","FtsIdealGenTrack");
theAnalysis->FillList(piplus, "PionLoosePlus",pidalgos);
theAnalysis->FillList(mcpiplus, "PionLoosePlus");
for (Int t ipiplus=0;ipiplus<piplus.GetLength();++ipiplus){</pre>
  if(piplus[ipiplus]->GetMcTruth()) {
   if(!theAnalysis->McTruthMatch(piplus[ipiplus]))
               //(1) pointer set, but no McTruthMatch
 } else
               //(2) pointer not even set
for (Int_t ipiplus=0;ipiplus<mcpiplus.GetLength();++ipiplus){
  if(mcpiplus[ipiplus]->GetMcTruth()) {
    if(!theAnalysis->McTruthMatch(mcpiplus[ipiplus]))
               //(3) pointer set, but no McTruthMatch
 } else
               //(4) pointer not even set
}
```

On every marker, I implemented a counter, to check, what is working in which way. But the result was again confusing.

| has not even a truth pointer | has a truth pointer but McTruthMatch failed | number of particles

```
PID | 15 | 2809 | 9031

MC | 28 | 847 | 9558  // in this case:

MC=PidAlgoIdealCharged
```

I understand, that with a pid algorithm the McTruthMatch failed so often. I mean, the actual pid is crap (or "not the best one" ). As I understood right, the pointer is set after track reconstruction, and just the particles are identified wrong. Even that some of them didn't have a pointer makes sense to me. But why are in the PidAlgoIdealCharged-list so many candidates without a pointed and, that's what I was really wondering about, didn't pass the McTruthMatch!?

This time, I'm using trunk, rev 21245!!!

```
Additionally: What are the criteria for setting the truth pointer? And shall I change theAnalysis->FillList(mcpiplus, "PionLoosePlus") to something like theAnalysis->FillList(mcpiplus, "PionAllPlus"); for(int i=0;mcpiplus.GetLength(),i++) { if(theAnalysis->McTruthMatch(mcpiplus[i])) mcpiplustrue.Add(mcpiplus[i]); // mcpiplustrue as a new RhoCandList
```

}

## Thanks in advance Simon