Subject: [FIXED] Fixed bug in fsim
Posted by Klaus Götzen on Thu, 29 May 2014 17:45:40 GMT
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Hi all,

I just found and fixed a bug in fsim (scrut14/trunk) concerning Electron/Muon PID and strange values of EmcCalEnergy/MuoIron in the PndPidCandidate caused by uninitialized values in PndFsmResponse.

So if you use electron or muon PID in your channel you should get now correct (and perhaps better) results.

Best,
Klaus

Subject: Re: Fixed bug in fsim
Posted by donghee on Thu, 29 May 2014 23:08:22 GMT
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Hi Klaus,

Thank you for your fix.
I am working with the data containing few muon particles.
I am a bit confusing because of available information of muon chamber.
When I try to access the MuoNumberOfLayers() in the fast simulation, it could not possible to access it because it is simply not implemented.
But in principle I can use and access the information on MuonIron length, because it is in there.
Is it correct?

Best wishes,
Donghee

Subject: Re: Fixed bug in fsim
Posted by Klaus Götzen on Fri, 30 May 2014 06:44:47 GMT
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Hi Donghee,

the detector information stored (and simulated!) in Fast Sim is rather sparse, because it's not so simple to parametrize everything. You can only find selected ones, which are (see here: https://subversion.gsi.de/trac/fairroot/browser/pandaroot/release/scrut14/fsim/PndFsmResponse.h#L148)

```
double _m2;             //square of particle mass in Tof
double _MvddEdx;        //dEdx in Mvd
```

```
double _TpcdEdx;          //dEdx in Tpc
double _SttdEdx;          //dEdx in Stt
double _DrcDiscThtc;      //Theta_c Disc Dirc
double _DrcBarrelThtc;    //Theta_c Barrel Dirc
double _RichThtc;         //Theta_c Rich
double _EmcEcal;          //calibrated energy deposit in calorimeter
double _MuoIron;          //penetration depth in Muon detector iron
```

Since we don't use PID ToF in the moment, m2 is not filled at the moment (as well as the dE/dx value from TPC, which is still in the interface).

Best,
Klaus

Subject: Re: Fixed bug in fsim
Posted by Klaus Götzen on Sun, 01 Jun 2014 06:17:30 GMT
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Hi,

just as update: I think the bug affected only the values of EmcCalEnergy and MuoIron themselves, not the connected PID probabilities. So there is no need to rerun simulations if you didn't use the values directly.

Best regards and sorry for the inconvenience,
Klaus
